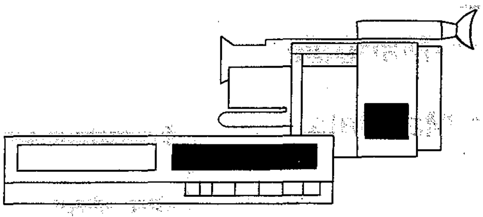
NOKIA
CONSUMER ELECTRONICS



VR

1991

NOKIA UNTERHALTUNGSELEKTRONIK GmbH
Service, Östliche 132, Postfach 1526
D-7530 Pforzheim

Service-Manual

NOKIA NOKIA 3782 HIFI VPS

Ⓓ Schaltbilder, Leiterplatten, Ersatzteile-Liste

Elektrischer Abgleich und Mechanik-Justagen, siehe Rückseite

⚠ **Sicherheitsbauteil!**
Dieses Symbol kennzeichnet in den Schaltbildern alle Bauteile, die nur durch Originalteile ersetzt werden dürfen.

Bei Reparaturen gültige Sicherheitsvorschriften beachten!

(GB) Circuit diagrams, P.C.B., spare parts list

Electrical alignment and mechanical adjustments, see rear page

⚠ **Safety Component!**
This symbol identifies in the circuit diagrams all safety critical parts. Replace only with specified part numbers.

Service and repair work to be performed only in accordance with existing safety regulations!

Ⓕ Schémas, circuits imprimés, liste des pièces détachées

Alignement et mécanique ajustages, voir page précédante

⚠ **Composant de protection!**
Ce symbol indique tous les composants dans les schémas, qui doivent être remplacés uniquement par des pièces d'origines.

Pendant le dépannage respecter les régulations du sécurité!

Änderungen vorbehalten
Modifications reserved
Modifications réservées

6611 76 01
(801) SA

Liste der Service-Manuale **Liste of Service Manuals** **Liste des manuals** **Modell** **Model** **Modèle**	Schaltbilder, Leiterplatten, Ersatzteile-Liste Circ. dirgr., P.C.B.,spare parts list Schémas circ. imprimés, liste des pièces détachées **No.**	Elektrischer Abgleich Electrical alignment Alignement **No.**	Mechanik-Justagen Mechanical adjustments Mécanique ajustages **No.**
NOKIA 3702 VPS NOKIA 3702 NOKIA 3702 H NOKIA 3722 UK NOKIA 3722 IR	6611 77 83	6611 77 84	6611 77 85 and 6611 77 06
NOKIA 3722 VPS NOKIA 3722	6611 77 86		
SCHAUB LORENZ 4722 VPS SCHAUB LORENZ 4722 LUXOR 4722 N	6611 77 87		
NOKIA 3732 VPS NOKIA 3732	6611 77 88	6611 77 89	
NOKIA 3742 VPT	6611 77 90	6611 77 91	
NOKIA 3742 VPS NOKIA 3742 NOKIA 3742 UK	6611 77 92		
SCHAUB LORENZ 4742 VPS SCHAUB LORENZ 4742 LUXOR 4742 N	6611 77 93		
OCEANIC 5702 S OCEANIC 5722 S	6611 77 94	6611 77 95	
OCEANIC 5742 MS	6611 77 96	6611 77 97	
OCEANIC 5752 MS	6611 77 98	6611 77 99	
NOKIA 3782 HIFI VPS	6611 76 01	6611 76 02	
NOKIA 3782 HIFI NICAM NOKIA 3782 HIFI UK LUXOR 4762 HIFI NICAM	6611 76 03		

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ELECTRICAL PARTS

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NOTE: 1. Parts order must contain Model Number, Part Number and Description.
2. N.S.P. : Not avilable as service parts.

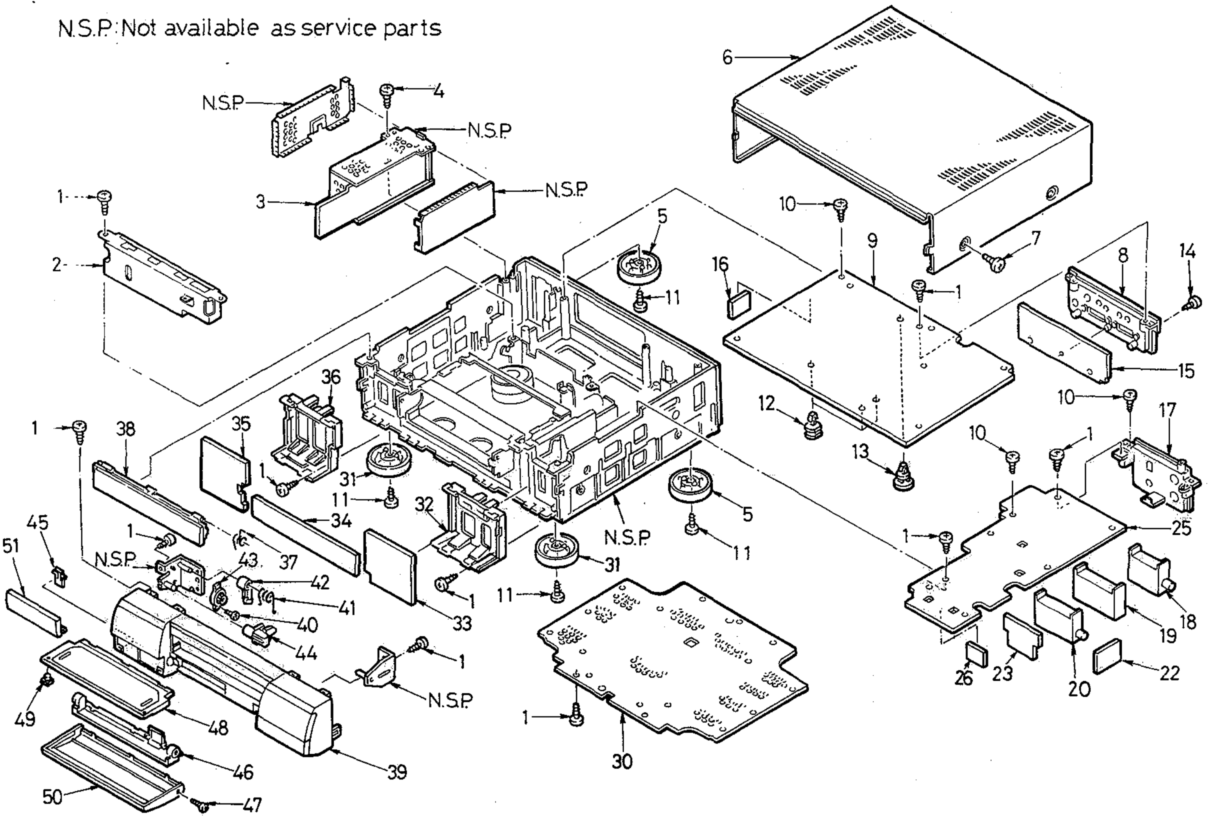
LOCATION	PARTS NO.	DESCRIPTION
ACCESSORIES		
	613 126 0436	REMOCON,RC282
	613 125 3704	INSTRUCTION MANUAL
	613 124 3668	CAUTION SHEET,DEW
	613 077 4415	CABLE,ANT
	613 095 0550	CORD,POWER

LOCATION	PARTS NO.	DESCRIPTION
PACKING MATERIALS		
	613 126 0467	CORR CASE,INNER
	613 126 0504	CUSHION,INNER,FRONT
	613 126 0511	CUSHION,INNER,BACK
	613 095 0765	POLYE COVER,INNER
	613 127 5904	BAR CODE LABEL

CABINET & CHASSIS PARTS

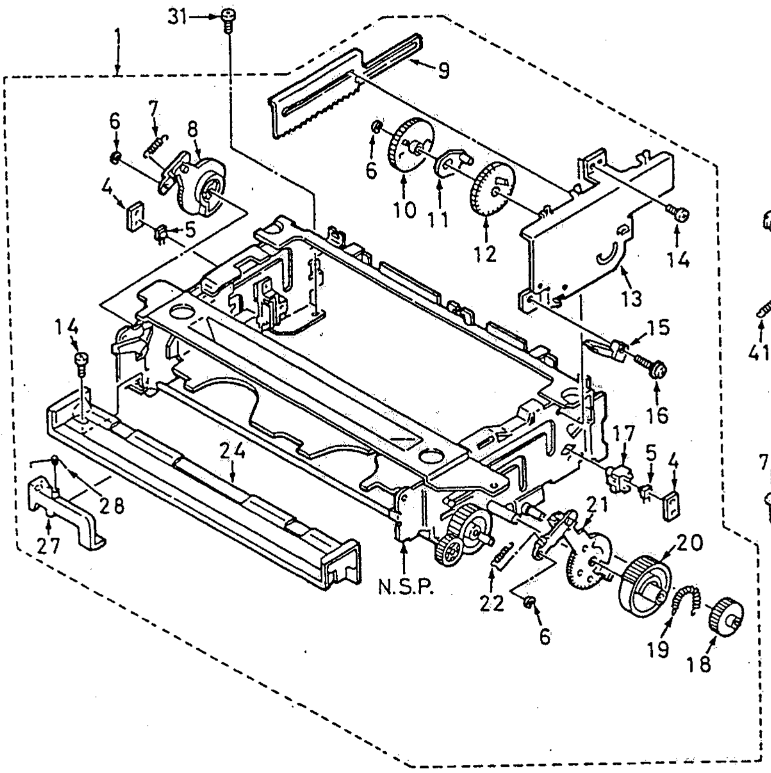
LOCATION	PARTS NO.	DESCRIPTION
1	411 137 0007	SCR L-TPG BIN 3X10
2	613 125 8532	COMPL PCB,VP-1
3	613 124 7314	COMPL PCB,PW-1
4	411 021 7907	SCR S-TPG BIN 4X12
5	613 129 8699	STAND,REAR
6	613 129 7821	COVER,TOP
7	412 028 9406	SPECIAL SCREW
8	613 122 0027	TERMINAL,PAL
9	613 125 9515	COMPL PCB,CP-A
10	411 021 3800	SCR S-TPG BIN 3X10
11	411 137 0007	SCR L-TPG BIN 3X10
OR	411 021 4005	SCR S-TPG BIN 3X12
12	613 053 8055	FIXER
13	613 126 6629	HOLDER
14	411 021 3701	SCR S-TPG BIN 3X10
15	613 125 9751	COMPL PCB,TB-1
16	613 120 6076	COMPL PCB,VD-1
17	613 122 0034	TERMINAL,RF
18	613 080 5836	MODULATOR,RF
OR	613 120 5659	MODULATOR,RF
19	613 108 3578	IF PACK
20	613 107 9403	TUNER PACK
22	613 127 8035	COMPL PCB,TN-7
23	613 104 3091	DECODER
25	613 126 1365	COMPL PCB,CP-B
26	613 108 5534	COMPL,TM-8
30	613 122 0010	COVER,BOTTOM
31	613 123 8916	STAND,FRONT
32	613 125 4893	FRAME,RIGHT
33	613 125 9768	COMPL PCB,TM-1
34	613 125 9799	COMPL PCB,AD-3
35	613 125 9782	COMPL PCB,AD-2
36	613 125 4886	FRAME,LEFT
37	613 116 6936	SPRING
38	613 124 7550	DOOR,CASSETTE
39	613 126 0009	ASSY,CABINET,FRONT
40	411 030 7202	SCR BIN 2X6
41	613 126 0313	SPRING
42	613 125 6156	LEVER
43	613 085 1789	DAMPER
44	613 125 6163	GEAR
45	613 048 2884	LOCK
46	613 124 9776	HOLDER,DOOR
47	411 025 9303	SCR S-TPG PAN 2X6
48	613 126 0382	SW,SPECIAL
49	613 081 4029	SPACER
50	613 126 2621	ASSY,DOOR
51	613 124 0988	DOOR,FRONT

N.S.P: Not available as service parts

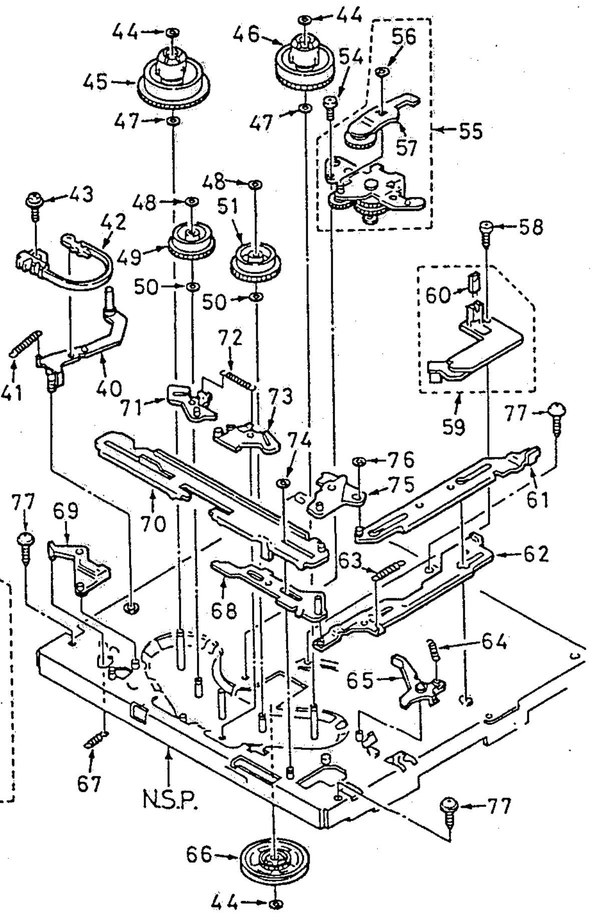


MECHANISM PARTS 1

LOCATION	PARTS NO.	DESCRIPTION
1	613 125 4879	COMPL,CASSETTE MECHA
4	613 022 0585	LID
5	407 098 3201	PHOTO COUPLE PN150SAN
6	411 015 9801	RING E 2.3
7	613 022 1643	SPRING,LINK L
8	613 022 0073	ASSY,GEAR,LEVER L
9	613 022 2695	RACK
10	613 022 2633	GEAR,LOCK
11	613 021 9916	ASSY,LEVER,PINION
12	613 022 2626	GEAR,PINION
13	613 021 9657	ASSY,BRACKET,GEAR
14	411 027 1305	SCR S-TPG BIN 2.6×4
15	613 006 4479	SPECIAL SWITCH
OR	613 095 0949	SPECIAL SWITCH
16	411 106 9208	SCR PAN+SW+W 2×9
17	613 022 0943	HOLDER,TRANSISTOR
18	613 022 2619	GEAR,IDLER
19	613 022 1667	SPRING,GEAR MAIN
20	613 022 2596	GEAR,MAIN
21	613 022 0097	ASSY,GEAR,LEVER R
22	613 022 1674	SPRING,LINK R
24	613 108 0256	BOARD,UNDER
27	613 124 5006	LEVER,SAFETY SWITCH
28	613 125 6149	SPRING,SAFETY SWITCH
31	411 001 8702	SCR BIN 3×6
40	613 100 0391	ASSY,LEVER,TENSION
41	613 085 7996	SPRING,LEVER TENSION
42	613 021 9701	ASSY,HOLDER,BAND
43	411 144 2803	SCR PAN+SW+W 2.6×6
OR	411 036 2805	SCR PAN+SW+W 2.6×6
44	411 109 1605	WASHER Y 2.6×6×0.25
45	613 078 8375	ASSY,REEL,SUPPLY
46	613 022 0110	ASSY,REEL,TAKE UP
47	412 021 5306	SPECIAL WASHER 3.1×6×0.3
OR	412 015 8900	SPECIAL WASHER 3.1×6×0.4
OR	412 015 8504	SPECIAL WASHER 3.1×6×0.5
48	411 109 1506	WASHER Y 2.1×6×0.25
OR	411 109 1407	WASHER Y 2.1×5×0.25
49	613 126 6148	GEAR,REEL SUPPLY
50	412 026 7305	SPECIAL WASHER 2.6×6×0.25
51	613 126 6155	GEAR,REEL TAKE UP
54	412 042 4302	SPECIAL SCREW 2.6×4
55	613 085 7101	COMPL,IDLER,CLUTCH
56	411 120 1301	WASHER Y 2.1×4×0.25
57	613 022 0134	ASSY,IDLER
58	411 021 3107	SCR S-TPG BIN 2.6×8
59	613 120 9053	COMPL,PCB,MC-4
60	407 016 7205	LED LN59
61	613 021 9985	ASSY,SLIDE,ACT PLATE
62	613 021 9992	ASSY,SLIDE,C BRAKE
63	613 022 1612	SPRING,RETURN SLIDE
64	613 022 1506	SPRING,SUB T
65	613 098 0106	ASSY,BRAKE,SUB T
66	613 077 3647	PULLEY,REEL
67	613 022 1490	SPRING,SUB SUPPLY
68	613 022 2374	SLIDE,ACT BRAKE
69	613 084 8871	BRAKE,SUB SUPPLY
70	613 022 0004	ASSY,SLIDE,M PLATE
71	613 080 9216	ASSY,BRAKE,SUPPLY
72	613 086 2914	SPRING,MAIN BRAKE
73	613 080 9209	ASSY,BRAKE,TAKE UP
74	411 109 3005	WASHER Y 2.6×5×0.5
75	613 022 2015	LEVER,CONT PLATE
76	412 015 9501	SPECIAL WASHER
77	411 021 7907	SCR S-TPG BIN 4×12

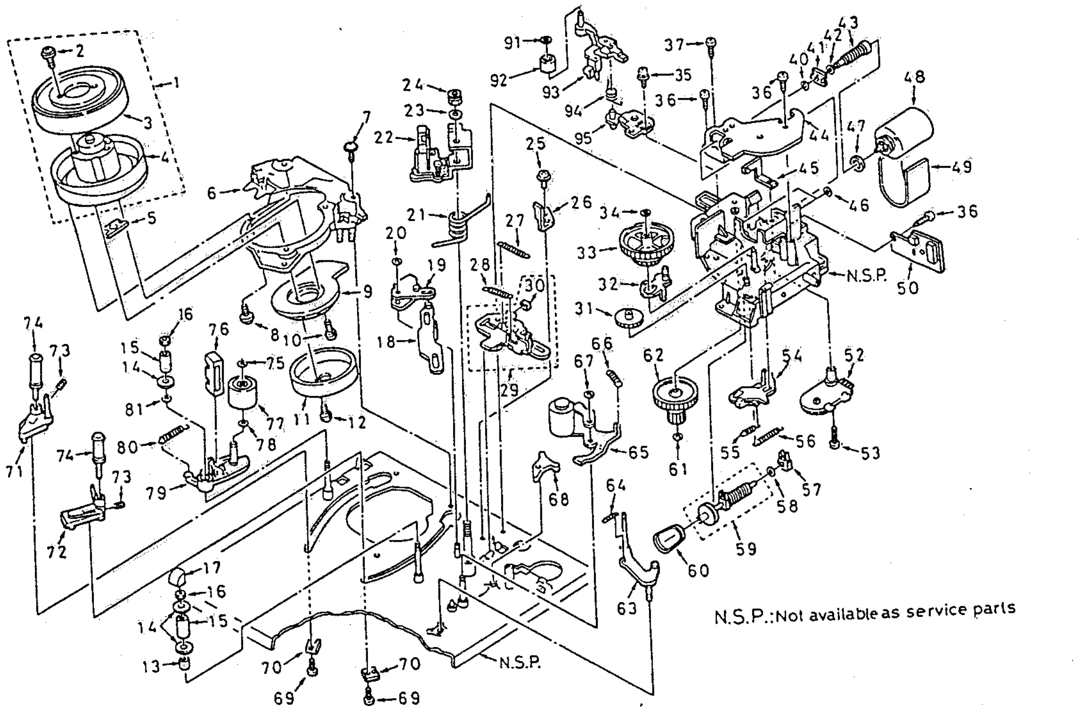


N.S.P.: Not available as service parts



MECHANISM PARTS 2

LOCATION	PARTS NO.	DESCRIPTION
1	613 097 5355	COMPL,CYLINDER,4H6P-R
2	411 038 1608	SCR PAN+W 3×8
3	613 097 5362	ASSY,CYLINDER,UPR 4H6P-R
4	613 095 9881	ASSY,CYLINDER,LWR 6K
5	613 107 0509	SPACER,MOTOR,0.5T
6	613 088 9072	BASE,CYLINDER
7	411 047 7509	SCR PAN+FLG 3×6
8	411 047 5000	SCR PAN+FLG 2.6×8
9	613 085 7279	STATOR,MOTOR CYLINDER
10	411 044 9209	SCR PAN+SW 2.3×8
OR	411 044 8301	SCR PAN+SW 2.3×10
11	613 022 4019	ROTOR,MOTOR CYLINDER
12	411 044 9001	SCR PAN+SW 2.3×6
13	613 123 4802	SLEEVE
14	613 053 3227	SPECIAL WASHER
15	613 123 4970	TAPE GUIDE
16	412 026 2607	SPECIAL NUT (M3)
17	613 123 9418	CAP
18	613 021 9961	ASSY,SLIDE,ACT PINCH
19	613 021 9800	ASSY,LEVER,CAM PINCH
20	411 109 2008	WASHER Y 3.1×8×0.5
21	613 022 1797	SPRING,ACE HEAD
22	613 079 7971	COMPL,BRACKET,HEAD
23	613 110 1692	SLEEVE,AC HEAD
24	412 015 8207	SPECIAL NUT (M5)
25	411 120 0007	SCR PAN+SW+W 2.6×5
26	613 120 3631	BRACKET,STOPPER
27	613 022 1575	SPRING,LINK LOCK
28	613 022 1582	SPRING,SLIDE BRAKE
29	613 094 9233	ASSY,SLIDE,CAM
30	613 022 2725	DAMPER
31	613 022 2534	GEAR,FRONT LOAD
32	613 094 1206	ASSY,LEVER,FRONT
33	613 077 3586	GEAR,HELICAL FRONT
34	613 027 0504	WASHER 4.1×6.5×0.5
35	411 046 8002	SCR PAN+SW+W 2.6×6
36	411 023 2801	SCR S-TPG PAN 2.6×6
37	411 023 3303	SCR S-TPG PAN 2.6×8
OR	411 021 3107	SCR S-TPG BIN 2.6×8
40	613 053 2381	SPECIAL WASHER
41	613 077 3227	HOLDER,WORM
42	613 027 0382	WASHER
43	613 078 8320	ASSY,WORM,FRONT
44	613 117 0599	BRACKET,HOLDER
45	613 093 9159	PLATE,NUT
46	613 093 8374	DAMPER,MOTOR
47	613 077 3616	DAMPER,WORM
48	613 121 9960	ASSY,LOADING MOTOR
49	613 092 9945	DAMPER,MOTOR
50	613 109 6462	COMPL,PCB,MC-3
52	613 110 0374	ROTARY SWITCH
53	411 126 5303	SCR PAN 2.6×13
54	613 092 9921	ASSY,SLIDE,FRONT
55	613 092 5985	SPRING,LEVER LOAD
56	613 092 5992	SPRING,LEVER ACT
57	613 092 5886	HOLDER,WORM
58	613 027 0627	WASHER 2.1×6×0.5
59	613 092 9938	ASSY,WORM,LOAD
60	613 022 2985	BELT,LOADING
61	412 033 4106	WASHER SLIT 2.6×5×0.5
62	613 077 3579	GEAR,HELICAL
63	613 102 9293	ASSY,LEVER,REV GUIDE
64	613 022 1568	SPRING,REVIEW LEVER
65	613 022 0158	COMPL,PINCH ROLLER
66	613 022 1483	SPRING,PINCH ROLLER
67	411 109 2107	WASHER Y 3.6×6×0.5
68	613 078 8160	COMPL,LEVER,ACT BRAKE
69	411 031 1209	SCR BIN 2.6×5
70	613 022 1919	PLATE,GUIDE
71	613 021 9725	ASSY,BASE,ROLLER S
72	613 021 9732	ASSY,BASE,ROLLER T
73	411 063 0904	SCR SET HEX-SCT 2×3
74	613 022 0233	ASSY,GUIDE,ROLLER
75	411 109 2602	WASHER Y 1.5×4×0.25
76	613 022 4224	HEAD,FULL ERASE
77	613 022 2817	IMPEDANCE ROLLER
78	412 032 5807	SPECIAL WASHER 2.1×5×0.13
79	613 093 8305	ASSY,LEVER,FE HEAD
80	613 022 1698	SPRING,ERASE HEAD
81	411 109 1704	WASHER Y 6.4×10×0.25
90	613 120 5703	FLEXIBLE FLAT CABLE 24
91	411 109 1803	WASHER Y 2.6×6×0.5
92	613 119 8562	ASSY,ROLLER,CLEANER
93	613 119 8548	ASSY,LEVER,CLEANER
94	613 119 8593	SPRING
95	613 119 8524	ASSY,BRACKET,CLEANER

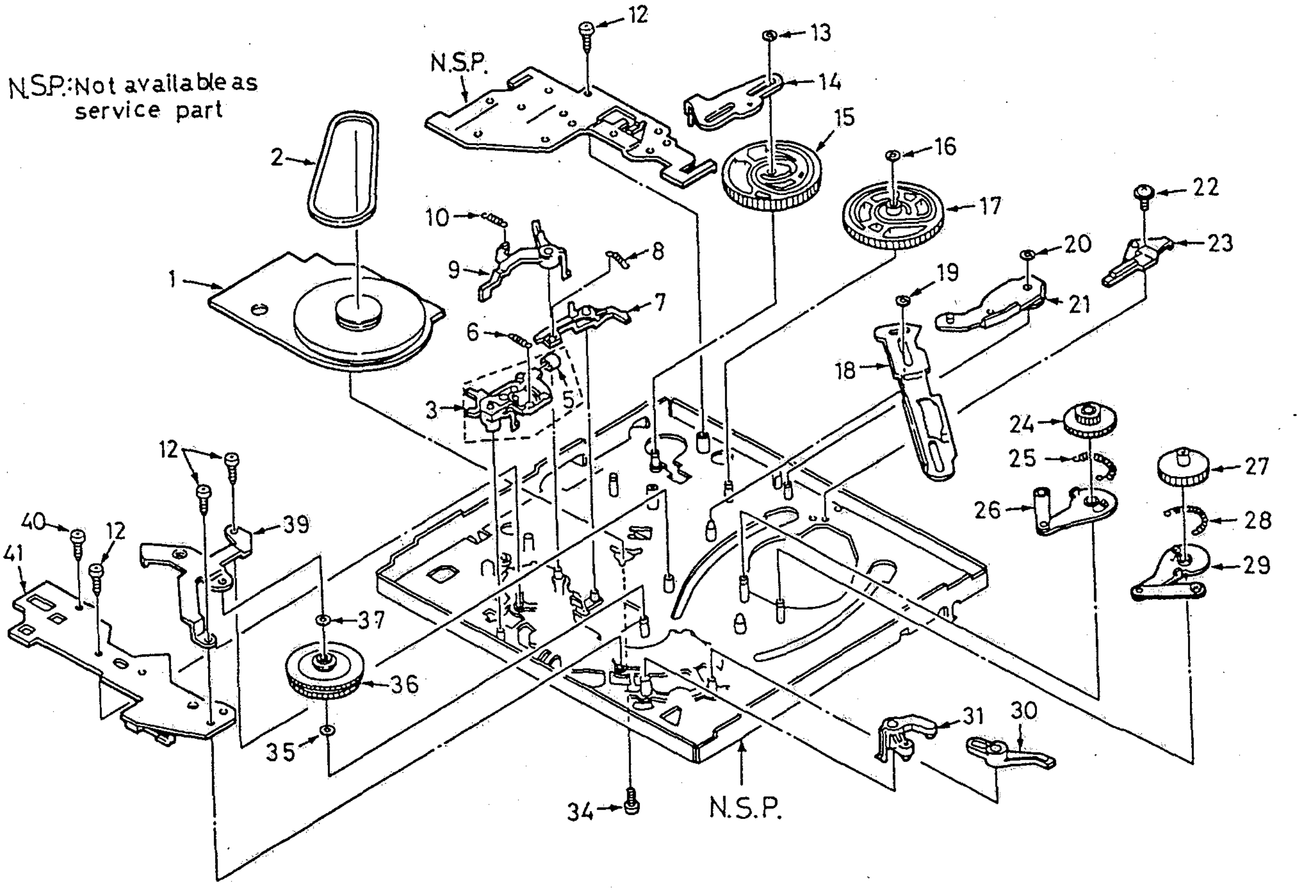


N.S.P.:Not available as service parts

MECHANISM PARTS 3

LOCATION	PARTS NO.	DESCRIPTION
1	613 022 4491	MOTOR,CAPSTAN
2	613 022 2978	BELT,REEL DRIVE
3	613 021 9848	ASSY,LEVER,CLUTCH
5	613 079 1023	DAMPER,LEVER CLUTCH
6	613 022 1520	SPRING,LEVER CLUTCH
7	613 082 3434	LEVER,CHANGE CLUTCH
8	613 022 1711	SPRING,CHANGE CLUTCH
9	613 081 7518	ASSY,BRAKE CAPSTAN
10	613 098 2285	SPRING,CAPSTAN
12	411 021 3107	SCR S-TPG BIN 2.6×8
13	411 109 2008	WASHER Y 3.1×8×0.5
14	613 021 9978	ASSY,SLIDE,CAM PLATE
15	613 022 2701	CAM,MODE
16	411 109 1902	WASHER Y 3.1×6×0.5
17	613 120 1576	CAM,MAIN
18	613 022 2664	RACK,LOAD
19	411 109 1803	WASHER Y 2.6×6×0.5
20	411 109 2107	WASHER Y 3.6×6×0.5
OR	411 109 2206	WASHER Y 3.6×8×0.5
21	613 021 9794	ASSY,LEVER,CAM LOAD
22	411 047 6809	SCR PAN+FLG 3×4
23	613 021 9763	ASSY,EARTH,CYLINDER
24	613 090 6380	GEAR,LOAD TAKE UP
25	613 022 1551	SPRING,GEAR LOAD T

LOCATION	PARTS NO.	DESCRIPTION
26	613 021 9879	ASSY,LEVER,LOAD T
27	613 090 6373	GEAR,LOAD SUPPLY
28	613 022 1704	SPRING,GEAR LOAD S
29	613 021 9862	ASSY,LEVER,LOAD S
30	613 022 2039	LEVER,RETURN TENSION
31	613 091 3104	ASSY,LEVER CONTROL
34	411 040 2303	SCR PAN 2.6×5
35	412 015 8603	SPECIAL WASHER 3.1×6×0.25
36	613 102 0900	ASSY,GEAR FRICTION
37	411 109 1605	WASHER Y 2.6×6×0.25
39	613 079 8121	BRACKET,PULLEY
40	411 100 0300	SCR S-TPG BIN 2.6×5
41	613 123 9067	COMPL,PCB,MC-1
R1	401 026 0607	CARBON 270 JA 1/6W
OR	401 017 0708	CARBON 270 JA 1/4W
R2	401 024 6700	CARBON 100 JA 1/6W
OR	401 012 4404	CARBON 100 JA 1/4W
R3	401 026 0607	CARBON 270 JA 1/6W
OR	401 017 0708	CARBON 270 JA 1/4W
D1	407 094 1300	PHOTO COUPLE SPI-315-04-C
OR	407 043 0101	PHOTO DIODE ON2170-R
D2	407 094 1300	PHOTO COUPLE SPI-315-04-C
OR	407 043 0101	PHOTO DIODE ON2170-R
SW1	613 022 4545	SPECIAL SWITCH,EP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ELECTRICAL PARTS

NOTE;

*Materials of Capacitors and Resistors are abbreviated as follows;

Resistors

MT-FILE	Metal Film Resistor
MT-GLAZE	Metal Glaze Resistor
OXIDE-MT	Oxide Metal Film Resistor

Capacitors

MT-POLYEST	Metallized Polyester Capacitor
MT-COMPO	Metallized Composite Capacitor
TA-SOLID	Tantalum Solid Capacitor
AL-SOLID	Aluminum Solid Capacitor
NP-ELECT	Non-Polarized Electrolytic Capacitor
OS-SOLID	Aluminum Solid Capacitors with Organic Semiconductive Electrolytic Capacitor
DL-ELECT	Double Layered Electrolytic Capacitor

*Tolerance of Capacitor(10pF over) and Resistor are noted with follow symboles.

F ············±1% G ············±2% J ············±5% K ············±10%
M ············±20% N ············±30% Z ············+80% ~ −20%

*N.S.P. : Not available as service parts.

LOCATION	PARTS NO.	DESCRIPTION			
COMPL PCB,CP-A					
COMPL.NO.	613 125 9515				
VIDEO CIRCUIT(VD-A)					
C1001	403 025 7304	CERAMIC	4.7P	K	50V
C1002	403 073 2702	CERAMIC	390P	J	50V
C1003	403 026 2209	CERAMIC	47P	J	50V
C1004	403 179 4501	NP-ELECT	0.47U	M	50V
C1005	403 150 1703	CERAMIC	91P	J	50V
C1006	403 071 1509	CERAMIC	180P	J	50V
C1007	403 075 4001	CERAMIC	820P	J	50V
C1008	403 134 4706	NP-ELECT	2.2U	M	50V
C1009	403 001 1906	CERAMIC	0.01U	M	16V
C1010	403 121 3408	ELECT	2.2U	M	50V
C1011	403 130 2904	ELECT	0.47U	M	50V
C1012	403 075 3103	CERAMIC	82P	J	50V
C1013	403 068 8801	CERAMIC	100P	J	50V
C1014	403 063 2200	POLYESTER	0.068U	K	50V
C1015	403 001 1906	CERAMIC	0.01U	M	16V
C1016	403 001 1906	CERAMIC	0.01U	M	16V
C1017	403 001 1906	CERAMIC	0.01U	M	16V
C1018	403 135 4002	ELECT	47U	M	6.3V
C1019	403 121 3408	ELECT	2.2U	M	50V
C1020	403 107 9905	ELECT	10U	M	16V
C1021	403 121 3408	ELECT	2.2U	M	50V
C1023	403 001 1906	CERAMIC	0.01U	M	16V
C1024	403 139 1205	ELECT	22U	M	10V
C1025	403 130 2904	ELECT	0.47U	M	50V
C1031	403 001 1906	CERAMIC	0.01U	M	16V
C1032	403 135 5009	ELECT	47U	M	10V
C1033	403 139 2707	ELECT	1U	M	50V
C1034	403 026 2209	CERAMIC	47P	J	50V
C1035	403 025 7304	CERAMIC	4.7P	K	50V
C1036	403 026 2209	CERAMIC	47P	J	50V
C1037	403 121 3002	ELECT	4.7U	M	25V
C1038	403 001 1906	CERAMIC	0.01U	M	16V
C1039	403 001 1906	CERAMIC	0.01U	M	16V
C1040	403 073 6205	CERAMIC	470P	J	50V
C1081	403 028 3402	CERAMIC	56P	J	50V
C1082	403 026 2209	CERAMIC	47P	J	50V
C1083	403 072 7500	CERAMIC	330P	J	50V
C1084	403 073 2702	CERAMIC	390P	J	50V
C1085	403 030 3506	CERAMIC	62P	J	50V
C1101	403 214 0703	CERAMIC	0.022U	J	16V
C1102	403 001 1906	CERAMIC	0.01U	M	16V
C1103	403 109 6308	ELECT	1U	M	50V
C1104	403 001 1906	CERAMIC	0.01U	M	16V
C1105	403 109 6308	ELECT	1U	M	50V
C1106	403 109 6308	ELECT	1U	M	50V

LOCATION	PARTS NO.	DESCRIPTION			
C1107	403 003 3700	CERAMIC	0.022U	Z	25V
C1108	403 214 1106	CERAMIC	0.047U	J	16V
C1109	403 001 1906	CERAMIC	0.01U	M	16V
C1112	403 139 2707	ELECT	1U	M	50V
C1113	403 214 1106	CERAMIC	0.047U	J	16V
C1114	403 025 8608	CERAMIC	43P	J	50V
C1115	403 150 1703	CERAMIC	91P	J	50V
C1116	403 001 1906	CERAMIC	0.01U	M	16V
C1117	403 135 4002	ELECT	47U	M	6.3V
C1118	403 068 8801	CERAMIC	100P	J	50V
C1119	403 001 1906	CERAMIC	0.01U	M	16V
C1121	403 001 1906	CERAMIC	0.01U	M	16V
C1124	403 121 0100	CERAMIC	0.082U	J	16V
OR	403 214 1403	CERAMIC	0.082U	J	16V
C1125	403 070 3702	CERAMIC	120P	J	50V
C1126	403 001 1906	CERAMIC	0.01U	M	16V
C1131	403 075 3103	CERAMIC	82P	J	50V
C1271	403 001 1906	CERAMIC	0.01U	M	16V
C1272	403 001 1906	CERAMIC	0.01U	M	16V
C1291	403 115 0901	CERAMIC	560P	J	50V
C1301	403 003 3700	CERAMIC	0.022U	Z	25V
C1351	403 014 2600	CERAMIC	18P	J	50V
C1352	403 014 2600	CERAMIC	18P	J	50V
C1601	403 139 1502	ELECT	10U	M	16V
C1602	403 107 9905	ELECT	10U	M	16V
C1603	403 154 3307	OS-SOLID	4.7U	M	10V
C1605	403 135 4101	ELECT	470U	M	6.3V
C1608	403 162 1807	ELECT	22U	M	10V
C1609	403 093 9606	OS-SOLID	1U	M	16V
C1631	403 022 7703	CERAMIC	33P	J	50V
C1632	403 024 1501	CERAMIC	39P	J	50V
C1661	403 068 8801	CERAMIC	100P	J	50V
C1682	403 012 6006	CERAMIC	15P	J	50V
D1001	407 007 9904	DIODE GMA01-BT			
OR	407 012 4406	DIODE 1SS133-T-77			
D1002	407 007 9904	DIODE GMA01-BT			
OR	407 012 4406	DIODE 1SS133-T-77			
D1005	407 007 9904	DIODE GMA01-BT			
OR	407 012 4406	DIODE 1SS133-T-77			
D1031	407 070 8408	ZENER DIODE GZS9.1Y-TB			
OR	407 053 8906	ZENER DIODE MTZ9.1C-T-77			
D1301	407 007 9904	DIODE GMA01-BT			
OR	407 012 4406	DIODE 1SS133-T-77			
D1302	407 007 9904	DIODE GMA01-BT			
OR	407 012 4406	DIODE 1SS133-T-77			
D1303	407 007 9904	DIODE GMA01-BT			
OR	407 012 4406	DIODE 1SS133-T-77			
D1304	407 007 9904	DIODE GMA01-BT			
OR	407 012 4406	DIODE 1SS133-T-77			

LOCATION	PARTS NO.	DESCRIPTION
D1601	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D1603	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D1604	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D1611	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D1612	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D1651	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
DL131	613 116 7001	DELAY,2H
OR	613 117 4870	DELAY,2H
IC101	409 178 3309	IC LA7340
IC102	409 171 9209	IC LC8992
IC111	409 208 7208	IC LA7332
IC161	409 003 4501	IC BA7021
OR	409 120 3401	IC LA7221
L1001	613 014 0951	COIL,INDUCTOR 68UHK
OR	613 014 4478	HF CHOKE 68UH K
L1031	613 014 0968	COIL,INDUCTOR 82UHK
OR	613 014 4485	HF CHOKE 82UH K
L1032	613 014 0739	COIL,INDUCTOR 1.0UHM
OR	613 014 4256	HF CHOKE 1.0UH K
L1081	613 014 0838	COIL,INDUCTOR 6.8UHK
OR	613 014 4355	HF CHOKE 6.8UH K
L1082	613 014 0890	COIL,INDUCTOR 22UHK
OR	613 014 4416	HF CHOKE 22UH K
L1083	613 014 0951	COIL,INDUCTOR 68UHK
OR	613 014 4478	HF CHOKE 68UH K
L1084	613 014 0968	COIL,INDUCTOR 82UHK
OR	613 014 4485	HF CHOKE 82UH K
L1101	613 014 0883	COIL,INDUCTOR 18UHK
OR	613 014 4409	HF CHOKE 18UH K
L1102	613 014 0791	COIL,INDUCTOR 3.3UHK
OR	613 014 4317	HF CHOKE 3.3UH K
L1103	613 014 0876	COIL,INDUCTOR 15UHK
OR	613 014 4393	HF CHOKE 15UH K
L1104	613 014 1019	COIL,INDUCTOR 220UHK
OR	613 014 4539	HF CHOKE 220UH K
L1105	613 014 0906	COIL,INDUCTOR 27UHK
OR	613 014 4423	HF CHOKE 27UH K
L1631	613 014 0975	COIL,INDUCTOR 100UHK
OR	613 014 4492	HF CHOKE 100UH K
L1681	613 014 0777	COIL,INDUCTOR 2.2UHM
OR	613 014 4294	HF CHOKE 2.2UH K
Q1001	405 093 0508	TR KSA1175-Y
OR	405 004 4007	TR 2SA608-E-SPA-AC
OR	405 004 4601	TR 2SA608-F-SPA-AC
OR	405 006 1707	TR 2SA933S-TP-Q
OR	405 006 1806	TR 2SA933S-T93-R
Q1002	405 093 0607	TR KSC2785-Y
OR	405 011 8401	TR 2SC1740S-DCTP-Q
OR	405 011 8500	TR 2SC1740S-DCTP-R
OR	405 019 2005	TR 2SC536-E-SPA-AC
OR	405 019 2807	TR 2SC536-F-SPA-AC
Q1003	405 093 0607	TR KSC2785-Y
OR	405 011 8401	TR 2SC1740S-DCTP-Q
OR	405 011 8500	TR 2SC1740S-DCTP-R
OR	405 019 2005	TR 2SC536-E-SPA-AC
OR	405 019 2807	TR 2SC536-F-SPA-AC
Q1004	405 063 9708	TR DTC144EL-TL2
Q1031	405 093 0508	TR KSA1175-Y
OR	405 004 4007	TR 2SA608-E-SPA-AC

LOCATION	PARTS NO.	DESCRIPTION
Q1031	405 004 4601	TR 2SA608-F-SPA-AC
OR	405 006 1707	TR 2SA933S-TP-Q
OR	405 006 1806	TR 2SA933S-T93-R
Q1032	405 057 6201	TR 2SC4038-Q-TL2
OR	405 057 6409	TR 2SC4038-R-TL2
Q1041	405 093 0607	TR KSC2785-Y
OR	405 011 8401	TR 2SC1740S-DCTP-Q
OR	405 011 8500	TR 2SC1740S-DCTP-R
OR	405 019 2005	TR 2SC536-E-SPA-AC
OR	405 019 2807	TR 2SC536-F-SPA-AC
Q1051	405 093 0508	TR KSA1175-Y
OR	405 004 4007	TR 2SA608-E-SPA-AC
OR	405 004 4601	TR 2SA608-F-SPA-AC
OR	405 006 1707	TR 2SA933S-TP-Q
OR	405 006 1806	TR 2SA933S-T93-R
Q1101	405 093 0508	TR KSA1175-Y
OR	405 004 4007	TR 2SA608-E-SPA-AC
OR	405 004 4601	TR 2SA608-F-SPA-AC
OR	405 006 1707	TR 2SA933S-TP-Q
OR	405 006 1806	TR 2SA933S-T93-R
Q1102	405 057 6201	TR 2SC4038-Q-TL2
OR	405 057 6409	TR 2SC4038-R-TL2
Q1103	405 093 0607	TR KSC2785-Y
OR	405 011 8401	TR 2SC1740S-DCTP-Q
OR	405 011 8500	TR 2SC1740S-DCTP-R
OR	405 019 2005	TR 2SC536-E-SPA-AC
OR	405 019 2807	TR 2SC536-F-SPA-AC
Q1104	405 093 0607	TR KSC2785-Y
OR	405 011 8401	TR 2SC1740S-DCTP-Q
OR	405 011 8500	TR 2SC1740S-DCTP-R
OR	405 019 2005	TR 2SC536-E-SPA-AC
OR	405 019 2807	TR 2SC536-F-SPA-AC
Q1105	405 057 6201	TR 2SC4038-Q-TL2
OR	405 057 6409	TR 2SC4038-R-TL2
Q1106	405 093 0607	TR KSC2785-Y
OR	405 011 8401	TR 2SC1740S-DCTP-Q
OR	405 011 8500	TR 2SC1740S-DCTP-R
OR	405 019 2005	TR 2SC536-E-SPA-AC
OR	405 019 2807	TR 2SC536-F-SPA-AC
Q1151	405 093 0508	TR KSA1175-Y
OR	405 004 4007	TR 2SA608-E-SPA-AC
OR	405 004 4601	TR 2SA608-F-SPA-AC
OR	405 006 1707	TR 2SA933S-TP-Q
OR	405 006 1806	TR 2SA933S-T93-R
Q1291	405 063 9708	TR DTC144EL-TL2
Q1301	405 064 0100	TR 2SA1561-TL2-Q
OR	405 064 0209	TR 2SA1561-TL2-R
Q1302	405 093 0607	TR KSC2785-Y
OR	405 011 8401	TR 2SC1740S-DCTP-Q
OR	405 011 8500	TR 2SC1740S-DCTP-R
OR	405 019 2005	TR 2SC536-E-SPA-AC
OR	405 019 2807	TR 2SC536-F-SPA-AC
Q1351	405 063 9104	TR DTA144EL-TL2
Q1381	405 063 9708	TR DTC144EL-TL2
Q1382	405 063 9708	TR DTC144EL-TL2
Q1391	405 063 9708	TR DTC144EL-TL2
Q1401	405 093 0607	TR KSC2785-Y
OR	405 011 8401	TR 2SC1740S-DCTP-Q
OR	405 011 8500	TR 2SC1740S-DCTP-R
OR	405 019 2005	TR 2SC536-E-SPA-AC
OR	405 019 2807	TR 2SC536-F-SPA-AC
Q1402	405 086 4506	TR KSA643C-Y
OR	405 006 6504	TR 2SA984-E-AA
OR	405 006 6702	TR 2SA984-F-AA
Q1403	405 093 0607	TR KSC2785-Y
OR	405 011 8401	TR 2SC1740S-DCTP-Q
OR	405 011 8500	TR 2SC1740S-DCTP-R
OR	405 019 2005	TR 2SC536-E-SPA-AC
OR	405 019 2807	TR 2SC536-F-SPA-AC

LOCATION	PARTS NO.	DESCRIPTION
Q1404	405 089 0109	TR 2SA1707-T-AN
OR	405 084 7905	TR 2SB1240-TV2-R
Q1601	405 004 4601	TR 2SA608-F-SPA-AC
OR	405 006 1806	TR 2SA933S-T93-R
Q1602	405 064 0100	TR 2SA1561-TL2-Q
OR	405 064 0209	TR 2SA1561-TL2-R
Q1611	405 064 0100	TR 2SA1561-TL2-Q
OR	405 064 0209	TR 2SA1561-TL2-R
Q1612	405 063 9708	TR DTC144EL-TL2
Q1631	405 093 0607	TR KSC2785-Y
OR	405 011 8401	TR 2SC1740S-DCTP-Q
OR	405 011 8500	TR 2SC1740S-DCTP-R
OR	405 019 2005	TR 2SC536-E-SPA-AC
OR	405 019 2807	TR 2SC536-F-SPA-AC
R1001	401 022 3008	CARBON 6.8K JA 1/4W
R1002	401 017 1705	CARBON 2.7K JA 1/4W
R1003	401 022 1806	CARBON 680 JA 1/4W
R1004	401 012 9201	CARBON 1M JA 1/4W
R1005	401 012 5609	CARBON 1K JA 1/4W
R1006	401 017 1705	CARBON 2.7K JA 1/4W
R1007	401 012 5609	CARBON 1K JA 1/4W
R1008	401 022 1806	CARBON 680 JA 1/4W
R1009	401 012 5609	CARBON 1K JA 1/4W
R1010	401 017 8506	CARBON 300 JA 1/4W
R1011	401 015 2605	CARBON 1.8K JA 1/4W
R1012	401 015 4609	CARBON 180K JA 1/4W
R1013	401 012 9201	CARBON 1M JA 1/4W
R1014	401 016 3700	CARBON 2.2K JA 1/4W
R1015	401 023 2703	CARBON 8.2K JA 1/4W
R1016	401 013 5202	CARBON 1.2K JA 1/4W
R1018	401 012 5609	CARBON 1K JA 1/4W
R1019	401 016 2505	CARBON 220 JA 1/4W
R1020	401 020 3802	CARBON 470K JA 1/4W
R1021	401 014 6000	CARBON 150K JA 1/4W
R1022	401 022 1806	CARBON 680 JA 1/4W
R1023	401 016 4707	CARBON 22K JA 1/4W
R1024	401 020 2805	CARBON 47K JA 1/4W
R1025	401 016 3700	CARBON 2.2K JA 1/4W
R1026	401 012 5609	CARBON 1K JA 1/4W
R1031	401 012 5609	CARBON 1K JA 1/4W
R1032	401 020 0702	CARBON 470 JA 1/4W
R1033	401 018 9700	CARBON 39 JA 1/4W
R1034	401 018 9700	CARBON 39 JA 1/4W
R1035	401 018 9700	CARBON 39 JA 1/4W
R1041	401 020 2805	CARBON 47K JA 1/4W
R1042	401 022 4005	CARBON 68K JA 1/4W
R1051	401 012 4404	CARBON 100 JA 1/4W
R1052	401 012 5609	CARBON 1K JA 1/4W
R1081	401 020 0702	CARBON 470 JA 1/4W
R1082	401 021 1807	CARBON 560 JA 1/4W
R1101	401 020 2805	CARBON 47K JA 1/4W
R1102	401 016 4707	CARBON 22K JA 1/4W
R1103	401 012 5609	CARBON 1K JA 1/4W
R1104	401 013 5202	CARBON 1.2K JA 1/4W
R1105	401 018 2701	CARBON 330 JA 1/4W
R1106	401 021 1807	CARBON 560 JA 1/4W
R1107	401 012 5609	CARBON 1K JA 1/4W
R1108	401 012 5609	CARBON 1K JA 1/4W
R1109	401 012 6903	CARBON 10K JA 1/4W
R1110	401 023 2703	CARBON 8.2K JA 1/4W
R1111	401 012 5609	CARBON 1K JA 1/4W
R1112	401 015 2605	CARBON 1.8K JA 1/4W
R1113	401 012 8006	CARBON 100K JA 1/4W
R1114	401 019 0904	CARBON 390 JA 1/4W
R1115	401 012 5609	CARBON 1K JA 1/4W
R1116	401 019 1802	CARBON 3.9K JA 1/4W
R1117	401 014 4006	CARBON 1.5K JA 1/4W
R1118	401 022 7105	CARBON 750 JA 1/4W
R1119	401 012 5609	CARBON 1K JA 1/4W
R1120	401 012 4404	CARBON 100 JA 1/4W
R1121	401 012 5609	CARBON 1K JA 1/4W
R1122	401 020 0702	CARBON 470 JA 1/4W
R1123	401 014 4006	CARBON 1.5K JA 1/4W
R1124	401 015 8805	CARBON 200 JA 1/4W
R1125	401 023 1607	CARBON 820 JA 1/4W
R1126	401 012 5609	CARBON 1K JA 1/4W
R1127	401 014 8202	CARBON 160 JA 1/4W
R1152	401 012 5609	CARBON 1K JA 1/4W
R1271	401 022 1806	CARBON 680 JA 1/4W
R1272	401 016 2505	CARBON 220 JA 1/4W
R1301	401 012 6903	CARBON 10K JA 1/4W
R1302	401 012 5609	CARBON 1K JA 1/4W
R1303	401 012 5609	CARBON 1K JA 1/4W
R1304	401 020 2805	CARBON 47K JA 1/4W
R1305	401 016 4707	CARBON 22K JA 1/4W
R1306	401 015 4609	CARBON 180K JA 1/4W
R1351	401 016 3700	CARBON 2.2K JA 1/4W
R1352	401 016 3700	CARBON 2.2K JA 1/4W
R1381	401 012 6903	CARBON 10K JA 1/4W
R1391	401 014 2804	CARBON 150 JA 1/4W
R1401	401 016 4707	CARBON 22K JA 1/4W
R1402	401 016 4707	CARBON 22K JA 1/4W
R1403	401 020 1907	CARBON 4.7K JA 1/4W
R1404	401 020 1907	CARBON 4.7K JA 1/4W
R1405	401 020 2805	CARBON 47K JA 1/4W
R1406	401 020 2805	CARBON 47K JA 1/4W
R1407	401 015 2605	CARBON 1.8K JA 1/4W
R1408	401 016 2505	CARBON 220 JA 1/4W
R1601	401 012 5609	CARBON 1K JA 1/4W
R1602	401 012 5609	CARBON 1K JA 1/4W
R1607	401 021 1807	CARBON 560 JA 1/4W
R1608	401 022 6702	CARBON 75 JA 1/4W
R1609	401 013 9408	CARBON 1.3K JA 1/4W
R1610	401 021 1807	CARBON 560 JA 1/4W
R1611	401 012 6903	CARBON 10K JA 1/4W
R1612	401 021 2903	CARBON 5.6K JA 1/4W
R1613	401 021 2903	CARBON 5.6K JA 1/4W
R1614	401 016 4707	CARBON 22K JA 1/4W
R1615	401 021 0602	CARBON 56 JA 1/4W
R1616	401 012 5609	CARBON 1K JA 1/4W
R1631	401 021 2903	CARBON 5.6K JA 1/4W
R1632	401 012 5609	CARBON 1K JA 1/4W
R1633	401 023 1607	CARBON 820 JA 1/4W
R1634	401 015 2605	CARBON 1.8K JA 1/4W
R1641	401 015 2605	CARBON 1.8K JA 1/4W
TH101	407 142 4208	THERMISTOR TD5-C310DB
VR101	613 079 2525	VR,SEMI 1KB
OR	613 120 8537	VR,SEMI 1KB
VR102	613 079 2532	VR,SEMI 10KB
OR	613 120 8544	VR,SEMI 10KB
VR103	613 120 8506	VR,SEMI 4.7KB
OR	613 120 8650	VR,SEMI 4.7KB
VR104	613 079 2532	VR,SEMI 10KB
OR	613 120 8544	VR,SEMI 10KB
VR105	613 079 2525	VR,SEMI 1KB
OR	613 120 8537	VR,SEMI 1KB
VR181	613 001 8953	SEMI VR 470B
OR	613 097 7984	VR,SEMI 470B
VR182	613 001 8977	SEMI VR 1KB
OR	613 097 7892	VR,SEMI 1KB
X1101	613 080 9407	OSC,CRYSTAL 4.43MHZ
OR	613 093 8008	OSC,CRYSTAL 4.433619MHZ
OR	613 120 8865	OSC,CRYSTAL 4.433619MHZ

LOCATION	PARTS NO.	DESCRIPTION
XF101	613 004 5539	LC PACK 4MHZ LPF
XF111	613 111 3800	FILTER,5.06 4.43M B,1M L

AUDIO CIRCUIT(AD-A)

LOCATION	PARTS NO.	DESCRIPTION
	613 126 7329	FLEXIBLE FLAT CABLES,CN251
C2001	403 191 8709	ELECT 1U M 50V
C2002	403 075 4506	CERAMIC 820P K 50V
C2004	403 167 6500	ELECT 33U M 6.3V
C2005	403 003 0600	CERAMIC 0.018U K 25V
C2006	403 193 8608	ELECT 0.47U M 50V
C2008	403 001 7403	CERAMIC 4700P K 16V
C2009	403 191 8600	ELECT 4.7U M 25V
C2010	403 189 2405	ELECT 10U M 16V
C2013	403 003 2406	CERAMIC 0.022U J 25V
C2016	403 191 8709	ELECT 1U M 50V
C2017	403 149 0700	ELECT 33U M 16V
C2018	403 191 8600	ELECT 4.7U M 25V
C2019	403 163 8409	ELECT 47U M 16V
C2020	403 071 6207	CERAMIC 220P K 50V
C2021	403 082 4209	POLYPRO 6800P J 100V
C2022	403 001 7403	CERAMIC 4700P K 16V
C2024	403 003 2802	CERAMIC 0.022U K 25V
C2025	403 003 3700	CERAMIC 0.022U Z 25V
C2051	403 069 1207	CERAMIC 1000P K 50V
C2071	403 075 4001	CERAMIC 820P J 50V
C2072	403 191 8709	ELECT 1U M 50V
C2073	403 003 8606	CERAMIC 0.039U J 25V
C2075	403 191 8600	ELECT 4.7U M 25V
C2301	403 121 3002	ELECT 4.7U M 25V
C2302	403 121 3002	ELECT 4.7U M 25V
C2303	403 121 3002	ELECT 4.7U M 25V
C2304	403 001 1609	CERAMIC 0.01U K 16V
C2305	403 129 5602	ELECT 33U M 10V
C2306	403 121 3002	ELECT 4.7U M 25V
C2307	403 107 9509	ELECT 100U M 10V
C2308	403 135 5009	ELECT 47U M 10V
C2309	403 134 9602	ELECT 47U M 16V
C2310	403 107 9905	ELECT 10U M 16V
C2311	403 163 8003	ELECT 33U M 10V
C2312	403 001 1609	CERAMIC 0.01U K 16V
C2313	403 134 8100	ELECT 100U M 6.3V
C2314	403 001 3801	CERAMIC 1500P K 16V
C2315	403 073 7004	CERAMIC 470P K 50V
C2318	403 001 1609	CERAMIC 0.01U K 16V
C2319	403 135 3500	ELECT 220U M 6.3V
C2320	403 135 5009	ELECT 47U M 10V
C2323	403 193 9001	ELECT 3.3U M 50V
C2401	403 121 3002	ELECT 4.7U M 25V
C2402	403 121 3002	ELECT 4.7U M 25V
C2403	403 121 3002	ELECT 4.7U M 25V
C2404	403 001 1609	CERAMIC 0.01U K 16V
C2405	403 129 5602	ELECT 33U M 10V
C2406	403 121 3002	ELECT 4.7U M 25V
C2407	403 107 9509	ELECT 100U M 10V
C2408	403 135 5009	ELECT 47U M 10V
C2409	403 134 9602	ELECT 47U M 16V
C2410	403 107 9905	ELECT 10U M 16V
C2411	403 129 5602	ELECT 33U M 10V
C2412	403 001 1609	CERAMIC 0.01U K 16V
C2413	403 134 8100	ELECT 100U M 6.3V
C2414	403 001 3801	CERAMIC 1500P K 16V
C2415	403 073 7004	CERAMIC 470P K 50V
C2418	403 001 1609	CERAMIC 0.01U K 16V
C2419	403 135 3500	ELECT 220U M 6.3V
C2420	403 135 5009	ELECT 47U M 10V
C2423	403 135 7805	ELECT 3.3U M 50V
C2501	403 193 9001	ELECT 3.3U M 50V

LOCATION	PARTS NO.	DESCRIPTION
C2502	403 134 9602	ELECT 47U M 16V
C2503	403 107 9905	ELECT 10U M 16V
C2504	403 125 5606	ELECT 100U M 16V
C2505	403 001 1609	CERAMIC 0.01U K 16V
C2506	403 069 1207	CERAMIC 1000P K 50V
C2507	403 072 7500	CERAMIC 330P J 50V
C2508	403 167 6500	ELECT 33U M 6.3V
C2509	403 191 8600	ELECT 4.7U M 25V
C2510	403 189 2405	ELECT 10U M 16V
C2511	403 107 9905	ELECT 10U M 16V
C2513	403 121 3408	ELECT 2.2U M 50V
C2514	403 134 9602	ELECT 47U M 16V
C2515	403 001 1609	CERAMIC 0.01U K 16V
C2517	403 003 6701	CERAMIC 0.033U K 25V
C2518	403 125 5606	ELECT 100U M 16V
C2520	403 135 5009	ELECT 47U M 10V
C2521	403 069 1207	CERAMIC 1000P K 50V
C2522	403 001 1609	CERAMIC 0.01U K 16V
C2527	403 107 9905	ELECT 10U M 16V
C2601	403 163 8409	ELECT 47U M 16V
C2603	403 191 8709	ELECT 1U M 50V
C2604	403 189 2405	ELECT 10U M 16V
C2605	403 150 6500	ELECT 22U M 16V
C2606	403 191 8600	ELECT 4.7U M 25V
C2612	403 191 8709	ELECT 1U M 50V
C2614	403 154 5806	OS-SOLID 6.8U M 16V
C2615	403 082 1604	POLYPRO 0.047U J 100V
C2616	403 001 1609	CERAMIC 0.01U K 16V
C2617	403 001 1609	CERAMIC 0.01U K 16V
C2618	403 163 7907	ELECT 47U M 6.3V
C2651	403 163 8409	ELECT 47U M 16V
C2652	403 189 2405	ELECT 10U M 16V
C2653	403 191 8808	ELECT 2.2U M 50V
C2654	403 189 2405	ELECT 10U M 16V
D2001	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2501	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2502	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2507	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2509	407 053 6308	ZENER DIODE MTZ5.1B-T-77
D2510	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2511	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2512	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2513	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2514	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2515	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2516	407 099 5303	ZENER DIODE MTZJ5.6B-T-77
D2517	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2518	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2651	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2659	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2660	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2661	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT

LOCATION	PARTS NO.	DESCRIPTION
D2662	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
IC201	409 133 1401	IC LA7294
IC231	409 252 4208	IC UPC2354AGF
IC232	409 036 8408	IC M5237L-TC04A-31
IC233	409 039 7309	IC NJM4556S
IC261	409 018 7603	IC LA7016
IC262	409 110 4302	IC M51131L
L2002	613 014 3037	COIL,INDUCTOR 10MHJ
OR	613 014 3532	COIL,INDUCTOR 10MHJ
L2003	613 014 2870	COIL,INDUCTOR 560UHK
OR	613 014 3259	COIL,INDUCTOR 560UHK
Q2001	405 024 9709	TR 2SD734-E-AA
OR	405 024 9907	TR 2SD734-F-AA
Q2303	405 076 6404	TR DTC343T-STP
Q2304	405 076 6404	TR DTC343T-STP
Q2403	405 076 6404	TR DTC343T-STP
Q2404	405 076 6404	TR DTC343T-STP
Q2502	405 007 3106	TR 2SB544-F-MP-AE
Q2503	405 089 2103	TR 2SC4483-S-AN
Q2504	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2505	405 000 6104	TR DTC144ES-DCTP
Q2506	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2507	405 003 7702	TR 2SA1346-AC
Q2508	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2509	405 003 7702	TR 2SA1346-AC
Q2512	405 003 7702	TR 2SA1346-AC
Q2514	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2515	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2518	405 018 2808	TR 2SC3402-AC
OR	405 000 3103	TR DTC114ES-DCTP
Q2519	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2520	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2522	405 024 0409	TR 2SD545-F-NP-AA
Q2523	405 018 2808	TR 2SC3402-AC
OR	405 000 3103	TR DTC114ES-DCTP
Q2601	405 003 7900	TR 2SA1348-AC
Q2602	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2603	405 019 2708	TR 2SC536-F-NP-AA
Q2606	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2651	405 033 6706	TR 2SD1468S-DCTP-R
Q2652	405 019 1909	TR 2SC536-E-NP-AA
OR	405 019 2708	TR 2SC536-F-NP-AA
Q2653	405 019 1909	TR 2SC536-E-NP-AA
OR	405 019 2708	TR 2SC536-F-NP-AA
Q2654	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2655	405 003 7603	TR 2SA1345-AC
Q2656	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2657	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2659	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2660	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
Q2661	405 018 2501	TR 2SC3399-AC

LOCATION	PARTS NO.	DESCRIPTION
Q2661	405 000 6104	TR DTC144ES-DCTP
Q2662	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
R2001	401 012 4404	CARBON 100 JA 1/4W
R2002	401 017 1705	CARBON 2.7K JA 1/4W
R2003	401 013 4106	CARBON 120 JA 1/4W
R2004	401 019 3905	CARBON 390K JA 1/4W
R2005	401 021 8905	CARBON 6.2K JA 1/4W
R2006	401 017 1705	CARBON 2.7K JA 1/4W
R2007	401 014 6000	CARBON 150K JA 1/4W
R2008	401 015 2605	CARBON 1.8K JA 1/4W
R2009	401 017 4508	CARBON 2.7M JA 1/4W
R2010	401 012 6903	CARBON 10K JA 1/4W
R2011	401 023 7401	CARBON 9.1K JA 1/4W
R2012	401 019 7705	CARBON 4.3K JA 1/4W
R2013	401 012 5609	CARBON 1K JA 1/4W
R2014	401 015 2605	CARBON 1.8K JA 1/4W
R2016	401 012 8006	CARBON 100K JA 1/4W
R2018	401 015 3701	CARBON 18K JA 1/4W
R2019	401 015 3701	CARBON 18K JA 1/4W
R2021	401 012 3308	CARBON 10 JA 1/4W
R2022	401 019 9501	CARBON 47 JA 1/4W
R2023	401 016 4707	CARBON 22K JA 1/4W
R2024	401 015 6405	CARBON 2.2 JA 1/4W
R2051	401 012 5609	CARBON 1K JA 1/4W
R2071	401 013 4106	CARBON 120 JA 1/4W
R2072	401 012 6903	CARBON 10K JA 1/4W
R2091	401 021 2903	CARBON 5.6K JA 1/4W
R2092	401 021 2903	CARBON 5.6K JA 1/4W
R2301	401 017 2702	CARBON 27K JA 1/4W
R2302	401 020 2805	CARBON 47K JA 1/4W
R2303	401 015 3701	CARBON 18K JA 1/4W
R2304	401 020 2805	CARBON 47K JA 1/4W
R2305	401 017 2702	CARBON 27K JA 1/4W
R2306	401 020 2805	CARBON 47K JA 1/4W
R2307	401 012 5609	CARBON 1K JA 1/4W
R2308	401 012 6903	CARBON 10K JA 1/4W
R2309	401 022 3008	CARBON 6.8K JA 1/4W
R2310	401 020 0702	CARBON 470 JA 1/4W
R2311	401 016 0402	CARBON 200K JA 1/4W
R2312	401 017 9701	CARBON 30K JA 1/4W
R2313	401 087 2909	MT-FILM 12K FD 1/6W
R2314	401 014 9001	CARBON 16K JA 1/4W
R2315	401 016 9603	CARBON 27 JA 1/4W
R2316	401 016 3700	CARBON 2.2K JA 1/4W
R2317	401 016 2505	CARBON 220 JA 1/4W
R2401	401 017 2702	CARBON 27K JA 1/4W
R2402	401 020 2805	CARBON 47K JA 1/4W
R2403	401 015 3701	CARBON 18K JA 1/4W
R2404	401 020 2805	CARBON 47K JA 1/4W
R2405	401 017 2702	CARBON 27K JA 1/4W
R2406	401 020 2805	CARBON 47K JA 1/4W
R2407	401 012 5609	CARBON 1K JA 1/4W
R2408	401 012 6903	CARBON 10K JA 1/4W
R2409	401 022 3008	CARBON 6.8K JA 1/4W
R2410	401 020 0702	CARBON 470 JA 1/4W
R2411	401 016 0402	CARBON 200K JA 1/4W
R2412	401 017 9701	CARBON 30K JA 1/4W
R2413	401 091 3305	MT-FILM 7.5K FD 1/6W
R2414	401 020 1907	CARBON 4.7K JA 1/4W
R2415	401 016 9603	CARBON 27 JA 1/4W
R2416	401 016 3700	CARBON 2.2K JA 1/4W
R2417	401 016 2505	CARBON 220 JA 1/4W
R2501	401 012 6903	CARBON 10K JA 1/4W
R2502	401 012 6903	CARBON 10K JA 1/4W
R2503	401 012 6903	CARBON 10K JA 1/4W
R2504	401 013 6308	CARBON 12K JA 1/4W
R2505	401 012 6903	CARBON 10K JA 1/4W

LOCATION	PARTS NO.	DESCRIPTION
R2506	401 020 1907	CARBON 4.7K JA 1/4W
R2507	401 020 1907	CARBON 4.7K JA 1/4W
R2509	401 012 9201	CARBON 1M JA 1/4W
R2510	401 012 8006	CARBON 100K JA 1/4W
R2513	401 012 6903	CARBON 10K JA 1/4W
R2514	401 023 7401	CARBON 9.1K JA 1/4W
R2515	401 012 6903	CARBON 10K JA 1/4W
R2518	401 017 8506	CARBON 300 JA 1/4W
R2519	401 019 2908	CARBON 39K JA 1/4W
R2520	401 016 4707	CARBON 22K JA 1/4W
R2521	401 017 9701	CARBON 30K JA 1/4W
R2522	401 020 1907	CARBON 4.7K JA 1/4W
R2523	401 012 6903	CARBON 10K JA 1/4W
R2524	401 012 6903	CARBON 10K JA 1/4W
R2525	401 018 4804	CARBON 33K JA 1/4W
R2526	401 016 4707	CARBON 22K JA 1/4W
R2527	401 019 1802	CARBON 3.9K JA 1/4W
R2528	401 016 4707	CARBON 22K JA 1/4W
R2529	401 018 8307	CARBON 36K JA 1/4W
R2531	401 012 5609	CARBON 1K JA 1/4W
R2534	401 016 2505	CARBON 220 JA 1/4W
R2536	401 019 7705	CARBON 4.3K JA 1/4W
R2537	401 018 4804	CARBON 33K JA 1/4W
R2538	401 020 1907	CARBON 4.7K JA 1/4W
R2539	401 019 7200	CARBON 430 JA 1/4W
R2540	401 012 6903	CARBON 10K JA 1/4W
R2541	401 020 1907	CARBON 4.7K JA 1/4W
R2542	401 016 4707	CARBON 22K JA 1/4W
R2544	401 087 4804	MT-FILM 8.2K FD 1/6W
R2545	401 012 6903	CARBON 10K JA 1/4W
R2547	401 014 4006	CARBON 1.5K JA 1/4W
R2548	401 012 6903	CARBON 10K JA 1/4W
R2551	401 020 1907	CARBON 4.7K JA 1/4W
R2552	401 020 1907	CARBON 4.7K JA 1/4W
R2553	401 012 6903	CARBON 10K JA 1/4W
R2557	401 015 2605	CARBON 1.8K JA 1/4W
R2558	401 021 2903	CARBON 5.6K JA 1/4W
R2605	401 018 8307	CARBON 36K JA 1/4W
R2606	401 014 5102	CARBON 15K JA 1/4W
R2607	401 012 6903	CARBON 10K JA 1/4W
R2608	401 013 6308	CARBON 12K JA 1/4W
R2609	401 013 6308	CARBON 12K JA 1/4W
R2620	401 012 3308	CARBON 10 JA 1/4W
R2621	401 014 5102	CARBON 15K JA 1/4W
R2622	401 019 9501	CARBON 47 JA 1/4W
R2623	401 012 3308	CARBON 10 JA 1/4W
R2624	401 018 4804	CARBON 33K JA 1/4W
R2651	401 020 8302	CARBON 5.1K JA 1/4W
R2652	401 020 1907	CARBON 4.7K JA 1/4W
R2653	401 012 6903	CARBON 10K JA 1/4W
R2654	401 020 1907	CARBON 4.7K JA 1/4W
R2655	401 014 5102	CARBON 15K JA 1/4W
R2658	401 021 4006	CARBON 56K JA 1/4W
R2659	401 021 4006	CARBON 56K JA 1/4W
R2660	401 012 6903	CARBON 10K JA 1/4W
R2661	401 012 6903	CARBON 10K JA 1/4W
R2662	401 021 2903	CARBON 5.6K JA 1/4W
R2663	401 016 4707	CARBON 22K JA 1/4W
T2001	613 109 3492	TRANS.OSC
OR	613 127 4334	TRANS.OSC 70KHZ
T2002	613 109 3485	TRANS.OSC
OR	613 127 4341	TRANS.OSC 70KHZ
VR201	613 001 9097	SEMI VR 100KB
VR233	613 001 5853	SEMI VR 10KB
VR234	613 001 5853	SEMI VR 10KB
VR235	613 001 9424	SEMI VR 20KB
OR	613 079 2549	VR.SEMI 20KB

LOCATION	PARTS NO.	DESCRIPTION
VR236	613 001 9424	SEMI VR 20KB
OR	613 079 2549	VR.SEMI 20KB
VR239	613 001 9400	SEMI VR 5KB
OR	613 112 4912	VR.SEMI 5KB
VR243	613 001 5648	SEMI VR 100KB

SYSTEM CONTROL & SERVO CIRCUIT(SV-A)

C3001	403 121 9509	CERAMIC 0.1U Z 50V
C3002	403 159 8109	ELECT 100U M 6.3V
C3003	403 139 1601	ELECT 22U M 16V
C3004	403 121 9509	CERAMIC 0.1U Z 50V
C3005	403 069 1207	CERAMIC 1000P K 50V
C3006	403 012 6006	CERAMIC 15P J 50V
C3007	403 017 9705	CERAMIC 22P J 50V
C3008	403 001 1609	CERAMIC 0.01U K 16V
C3009	403 010 7807	CERAMIC 12P J 50V
C3010	403 068 9402	CERAMIC 100P K 50V
C3012	403 001 1609	CERAMIC 0.01U K 16V
C3013	403 001 1609	CERAMIC 0.01U K 16V
C3014	403 139 1403	ELECT 47U M 10V
C3016	403 069 1207	CERAMIC 1000P K 50V
C3017	403 001 1609	CERAMIC 0.01U K 16V
C3018	403 001 1609	CERAMIC 0.01U K 16V
C3019	403 069 1207	CERAMIC 1000P K 50V
C3021	403 001 1609	CERAMIC 0.01U K 16V
C3022	403 001 1609	CERAMIC 0.01U K 16V
C3023	403 069 1207	CERAMIC 1000P K 50V
C3024	403 204 5107	NP-ELECT 10U M 25V
C3025	403 204 5107	NP-ELECT 10U M 25V
C3026	403 069 1207	CERAMIC 1000P K 50V
C3027	403 139 2905	ELECT 2.2U M 50V
C3028	403 121 9509	CERAMIC 0.1U Z 50V
C3029	403 002 2506	CERAMIC 0.01U M 25V
C3501	403 003 2802	CERAMIC 0.022U K 25V
C3502	403 071 6207	CERAMIC 220P K 50V
C3503	403 071 6207	CERAMIC 220P K 50V
C3504	403 001 6208	CERAMIC 2700P M 16V
C3505	403 001 1609	CERAMIC 0.01U K 16V
C3506	403 003 2802	CERAMIC 0.022U K 25V
C3507	403 119 6701	CERAMIC 0.068U K 16V
OR	403 214 2707	CERAMIC 0.068U K 16V
C3509	403 072 8200	CERAMIC 330P K 50V
C3512	403 139 1007	ELECT 47U M 6.3V
C3513	403 001 1609	CERAMIC 0.01U K 16V
C3514	403 086 2904	NP-ELECT 1U M 50V
C3515	403 139 1502	ELECT 10U M 16V
C3516	403 139 3001	ELECT 3.3U M 50V
C3517	403 074 9205	CERAMIC 680P K 50V
C3518	403 085 6101	NP-ELECT 33U M 16V
C3519	403 069 1207	CERAMIC 1000P K 50V
C3520	403 184 9102	MT-POLYEST 0.033U J 50V
C3521	403 069 1207	CERAMIC 1000P K 50V
C3522	403 139 1007	ELECT 47U M 6.3V
C3524	403 001 1906	CERAMIC 0.01U M 16V
C3525	403 139 2707	ELECT 1U M 50V
C3526	403 086 2904	NP-ELECT 1U M 50V
C3527	403 001 1609	CERAMIC 0.01U K 16V
C3528	403 139 2400	ELECT 0.22U M 50V
C3529	403 001 1609	CERAMIC 0.01U K 16V
C3530	403 121 9509	CERAMIC 0.1U Z 50V
C3951	403 059 2900	POLYESTER 2200P J 50V
OR	403 059 3006	POLYESTER 2200P J 50V
C3952	403 139 2707	ELECT 1U M 50V
C3953	403 139 1007	ELECT 47U M 6.3V
C3954	403 003 3700	CERAMIC 0.022U Z 25V
C3955	403 068 9402	CERAMIC 100P K 50V
C3956	403 139 2707	ELECT 1U M 50V

LOCATION	PARTS NO.	DESCRIPTION
D3001	407 078 2705	DIODE 1SS244-T-77
D3010	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D3021	407 070 8101	ZENER DIODE GZS8.2Y-BT
OR	407 063 9504	ZENER DIODE MTZJ8.2B-T-77
D3022	407 051 6904	ZENER DIODE GZS5.6Y-BT
OR	407 099 5303	ZENER DIODE MTZJ5.6B-T-77
D3023	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D3025	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D3501	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D3504	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D3505	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D3506	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D3951	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D3952	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D3953	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
IC301	410 128 9500	IC UPD78136GF-012-3B9
IC302	409 032 3704	IC MN1280-R
OR	409 032 3803	IC MN1280-S
OR	409 243 4200	IC MN1380-R
OR	409 243 4309	IC MN1380-S
IC303	409 114 4803	IC LB1641
IC352	409 178 3200	IC LA7124
IC391	409 225 6109	IC BA7046
L3005	613 014 1187	COIL.INDUCTOR 68UHJ
OR	613 014 4706	HF CHOKE 68UH J
Q3001	405 019 2807	TR 2SC536-F-SPA-AC
Q3002	405 019 2807	TR 2SC536-F-SPA-AC
Q3005	405 015 2603	TR 2SC2669-Y-TPE4
OR	405 016 1100	TR 2SC2839-F-SPA-AC
Q3006	405 019 2807	TR 2SC536-F-SPA-AC
Q3007	405 018 2808	TR 2SC3402-AC
Q3022	405 000 6104	TR DTC144ES-DCTP
OR	405 018 2501	TR 2SC3399-AC
Q3023	405 000 3103	TR DTC114ES-DCTP
OR	405 018 2808	TR 2SC3402-AC
Q3024	405 000 3103	TR DTC114ES-DCTP
OR	405 018 2808	TR 2SC3402-AC
Q3501	405 019 2807	TR 2SC536-F-SPA-AC
Q3601	405 000 6104	TR DTC144ES-DCTP
OR	405 018 2501	TR 2SC3399-AC
Q3602	405 000 6104	TR DTC144ES-DCTP
OR	405 018 2501	TR 2SC3399-AC
Q3952	405 016 1100	TR 2SC2839-F-SPA-AC
Q3953	405 000 6104	TR DTC144ES-DCTP
OR	405 018 2501	TR 2SC3399-AC
R3001	401 018 3708	CARBON 3.3K JA 1/4W
R3002	401 012 6903	CARBON 10K JA 1/4W
R3003	401 020 1907	CARBON 4.7K JA 1/4W
R3006	401 022 7105	CARBON 750 JA 1/4W
R3007	401 012 5609	CARBON 1K JA 1/4W
R3008	401 016 3700	CARBON 2.2K JA 1/4W
R3009	401 023 2703	CARBON 8.2K JA 1/4W
R3010	401 012 5609	CARBON 1K JA 1/4W
R3011	401 019 1802	CARBON 3.9K JA 1/4W
R3012	401 020 0702	CARBON 470 JA 1/4W

LOCATION	PARTS NO.	DESCRIPTION
R3014	401 019 1802	CARBON 3.9K JA 1/4W
R3015	401 012 5609	CARBON 1K JA 1/4W
R3016	401 018 4804	CARBON 33K JA 1/4W
R3017	401 018 4804	CARBON 33K JA 1/4W
R3018	401 012 6903	CARBON 10K JA 1/4W
R3031	401 012 5609	CARBON 1K JA 1/4W
R3032	401 012 5609	CARBON 1K JA 1/4W
R3033	401 012 5609	CARBON 1K JA 1/4W
R3034	401 020 1907	CARBON 4.7K JA 1/4W
R3035	401 020 1907	CARBON 4.7K JA 1/4W
R3036	401 020 1907	CARBON 4.7K JA 1/4W
R3041	401 020 1907	CARBON 4.7K JA 1/4W
R3042	401 016 0402	CARBON 200K JA 1/4W
R3043	401 016 0402	CARBON 200K JA 1/4W
R3044	401 012 5609	CARBON 1K JA 1/4W
R3045	401 012 5609	CARBON 1K JA 1/4W
R3046	401 012 5609	CARBON 1K JA 1/4W
R3047	401 012 5609	CARBON 1K JA 1/4W
R3048	401 012 5609	CARBON 1K JA 1/4W
R3049	401 020 2805	CARBON 47K JA 1/4W
R3050	401 018 4804	CARBON 33K JA 1/4W
R3051	401 020 1907	CARBON 4.7K JA 1/4W
R3052	401 012 5609	CARBON 1K JA 1/4W
R3053	401 016 4707	CARBON 22K JA 1/4W
R3054	401 014 7106	CARBON 1.5M JA 1/4W
R3055	401 012 6903	CARBON 10K JA 1/4W
R3059	401 020 2805	CARBON 47K JA 1/4W
R3060	401 018 4804	CARBON 33K JA 1/4W
R3061	401 014 7106	CARBON 1.5M JA 1/4W
R3062	401 016 4707	CARBON 22K JA 1/4W
R3063	401 022 7105	CARBON 750 JA 1/4W
R3064	402 036 4401	FUSIBLE RES 3.3 JA 1/2W
OR	402 036 3701	FUSIBLE RES 3.3 JA 1/2W
R3065	401 012 6903	CARBON 10K JA 1/4W
R3066	401 012 6903	CARBON 10K JA 1/4W
R3068	401 014 5102	CARBON 15K JA 1/4W
R3501	401 012 5609	CARBON 1K JA 1/4W
R3502	401 016 4707	CARBON 22K JA 1/4W
R3503	401 012 8006	CARBON 100K JA 1/4W
R3504	401 012 6903	CARBON 10K JA 1/4W
R3506	401 012 8006	CARBON 100K JA 1/4W
R3507	401 012 8006	CARBON 100K JA 1/4W
R3510	401 012 6903	CARBON 10K JA 1/4W
R3511	401 012 5609	CARBON 1K JA 1/4W
R3514	401 016 3700	CARBON 2.2K JA 1/4W
R3515	401 016 3700	CARBON 2.2K JA 1/4W
R3516	401 023 6909	CARBON 910 JA 1/4W
R3517	401 012 5609	CARBON 1K JA 1/4W
R3518	401 015 4609	CARBON 180K JA 1/4W
R3519	401 013 6308	CARBON 12K JA 1/4W
R3520	401 021 9902	CARBON 620K JA 1/4W
R3521	401 022 8508	CARBON 750K JA 1/4W
R3522	401 014 6000	CARBON 150K JA 1/4W
R3523	401 012 8006	CARBON 100K JA 1/4W
R3524	401 012 8006	CARBON 100K JA 1/4W
R3525	401 018 7508	CARBON 360 JA 1/4W
R3526	401 020 7800	CARBON 510 JA 1/4W
R3527	401 020 7800	CARBON 510 JA 1/4W
R3528	401 012 6903	CARBON 10K JA 1/4W
R3529	401 012 6903	CARBON 10K JA 1/4W
R3530	401 012 5609	CARBON 1K JA 1/4W
R3531	401 012 5609	CARBON 1K JA 1/4W
R3532	401 012 5609	CARBON 1K JA 1/4W
R3533	401 012 8006	CARBON 100K JA 1/4W
R3534	401 012 5609	CARBON 1K JA 1/4W
R3951	401 020 3802	CARBON 470K JA 1/4W
R3952	401 107 8003	MT-FILM 130K FD 1/4W
R3953	401 012 6903	CARBON 10K JA 1/4W
R3954	401 012 5609	CARBON 1K JA 1/4W

LOCATION	PARTS NO.	DESCRIPTION
R3955	401 020 3802	CARBON 470K JA 1/4W
R3956	401 018 3708	CARBON 3.3K JA 1/4W
R3957	401 018 3708	CARBON 3.3K JA 1/4W
R3958	401 012 8006	CARBON 100K JA 1/4W
R3959	401 016 3700	CARBON 2.2K JA 1/4W
R3960	401 017 1705	CARBON 2.7K JA 1/4W
R3961	401 016 3700	CARBON 2.2K JA 1/4W
R3962	401 016 3700	CARBON 2.2K JA 1/4W
VR351	613 001 9110	SEMI VR 220KB
OR	613 097 7953	VR,SEMI 220KB
VR353	613 001 9035	SEMI VR 10KB
OR	613 097 7908	VR,SEMI 10KB
VR354	613 001 9035	SEMI VR 10KB
OR	613 097 7908	VR,SEMI 10KB
XF301	613 129 4462	OSC,CRYSTAL 12MHZ

POWER SUPPLY CIRCUIT(PW-A)

LOCATION	PARTS NO.	DESCRIPTION
C5401	403 001 1609	CERAMIC 0.01U K 16V
C5402	403 139 1007	ELECT 47U M 6.3V
C5403	403 134 8100	ELECT 100U M 6.3V
D5401	407 012 4406	DIODE 1SS133-T-77
D5402	407 099 5204	ZENER DIODE MTZJ5.1B-T-77
Q5401	405 088 9103	TR 2SA1703-S-AN
OR	405 108 6907	TR 2SB1322A-R(TA)
OR	405 108 7003	TR 2SB1322A-S(TA)
Q5402	405 107 4102	TR 2SD1994-R (TA)
OR	405 107 4201	TR 2SD1994-S (TA)
OR	405 089 2103	TR 2SC4483-S-AN
R5401	401 021 8905	CARBON 6.2K JA 1/4W
R5402	401 016 3700	CARBON 2.2K JA 1/4W
R5403	401 012 5609	CARBON 1K JA 1/4W
R5404 ⚠	402 004 2200	FUSIBLE RES 5.6 JA 1/4W

COMPL PCB,VD-1

COMPL.NO. 613 120 6076

LOCATION	PARTS NO.	DESCRIPTION
B1701	405 018 2402	TR 2SC3398-TB
OR	405 000 2908	TR DTC114EK-T96
C1701	403 069 5601	CERAMIC 0.01U K 50V
C1702	403 033 4609	CERAMIC 82P J 50V
OR	403 033 6603	CERAMIC 82P J 50V
C1703	403 189 2405	ELECT 10U M 16V
C1704	403 068 0409	CERAMIC 0.1U Z 25V
C1705	403 189 2405	ELECT 10U M 16V
C1706	403 069 5601	CERAMIC 0.01U K 50V
D1701	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
IC171	409 003 4907	IC BA7025L
J1701	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
Q1701	405 015 9701	TR 2SC2814-F4-TB
OR	405 035 6100	TR 2SC2413K-T96-Q
R1701	401 037 5608	MT-GLAZE 10K JA 1/10W
R1702	401 038 2101	MT-GLAZE 2.7K JA 1/10W
R1703	401 037 6704	MT-GLAZE 1.2K JA 1/10W
R1704	401 037 5400	MT-GLAZE 1K JA 1/10W
R1705	401 038 0800	MT-GLAZE 22K JA 1/10W
R1706	401 037 5400	MT-GLAZE 1K JA 1/10W
R1707	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R1708	401 037 8104	MT-GLAZE 150K JA 1/10W
R1709	401 038 5805	MT-GLAZE 430 JA 1/10W
R1710	401 038 0800	MT-GLAZE 22K JA 1/10W
R1711	401 037 5608	MT-GLAZE 10K JA 1/10W
XF171	613 084 1681	FILTER 4.16MHZ B.F
XF172	613 015 8604	CHOKE COIL

COMPL PCB,VP-1

COMPL.NO. 613 125 8532

VIDEO PRE-AMP. CIRCUIT(VP-A)

LOCATION	PARTS NO.	DESCRIPTION
C1801	403 071 8102	CERAMIC 2200P K 50V
C1802	403 071 8102	CERAMIC 2200P K 50V
C1803	403 071 8102	CERAMIC 2200P K 50V
C1804	403 073 1200	CERAMIC 0.033U K 50V
C1805	403 191 8709	ELECT 1U M 50V
C1806	403 071 8102	CERAMIC 2200P K 50V
C1807	403 073 1200	CERAMIC 0.033U K 50V
C1808	403 073 1200	CERAMIC 0.033U K 50V
C1812	403 069 5601	CERAMIC 0.01U K 50V
C1813	403 069 5601	CERAMIC 0.01U K 50V
C1814	403 073 1200	CERAMIC 0.033U K 50V
C1815	403 069 5601	CERAMIC 0.01U K 50V
C1816	403 069 5601	CERAMIC 0.01U K 50V
C1817	403 069 1702	CERAMIC 1000P K 50V
C1818	403 154 3307	OS-SOLID 4.7U M 10V
C1820	403 154 5806	OS-SOLID 6.8U M 16V
C1826	403 068 8801	CERAMIC 100P J 50V
C1827	403 023 4503	CERAMIC 330P J 50V
C1828	403 069 5601	CERAMIC 0.01U K 50V
C1829	403 139 2707	ELECT 1U M 50V
C1830	403 069 5601	CERAMIC 0.01U K 50V
C1831	403 069 5601	CERAMIC 0.01U K 50V
C1833	403 020 0508	CERAMIC 27P J 50V
C1834	403 070 1005	CERAMIC 0.1U K 50V
C1835	403 009 5807	CERAMIC 100P J 50V
C1836	403 070 1005	CERAMIC 0.1U K 50V
C1837	403 069 5601	CERAMIC 0.01U K 50V
C1840	403 069 5601	CERAMIC 0.01U K 50V
C1841	403 139 2707	ELECT 1U M 50V
C1842	403 154 7206	OS-SOLID 1U M 25V
C1851	403 024 7206	CERAMIC 390P J 50V
C1852	403 031 2201	CERAMIC 680P J 50V
C1853	403 018 0602	CERAMIC 22P J 50V
OR	403 018 0503	CERAMIC 22P J 50V
C1855	403 033 4609	CERAMIC 82P J 50V
C1856	403 069 5601	CERAMIC 0.01U K 50V
C1857	403 069 5601	CERAMIC 0.01U K 50V
C1858	403 033 4609	CERAMIC 82P J 50V
C1859	403 020 0508	CERAMIC 27P J 50V
C1860	403 069 5601	CERAMIC 0.01U K 50V
C1861	403 070 1005	CERAMIC 0.1U K 50V
C1891	403 191 8709	ELECT 1U M 50V
C1892	403 073 1200	CERAMIC 0.033U K 50V
C1893	403 073 1200	CERAMIC 0.033U K 50V
C1895	403 069 1702	CERAMIC 1000P K 50V
C1896	403 073 1200	CERAMIC 0.033U K 50V
D1831	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D1851	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D1852	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
IC181	409 161 9806	IC LA7321

LOCATION	PARTS NO.	DESCRIPTION
J1835	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J1836	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J1837	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J1838	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J1851	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J1854	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J1891	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J1899	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
L1831	613 014 1019	COIL,INDUCTOR 220UHK
OR	613 014 4539	HF CHOKE 220UH K
L1851	613 014 0944	COIL,INDUCTOR 56UHK
OR	613 014 4461	HF CHOKE 56UH K
L1852	613 014 0951	COIL,INDUCTOR 68UHK
OR	613 014 4478	HF CHOKE 68UH K
OR	613 014 1187	HF CHOKE 68UH J
OR	613 014 4706	HF CHOKE 68UH J
L1855	613 015 6174	COIL,INDUCTOR 56UHJ
OR	613 014 8223	HF CHOKE 56UH J
L1856	613 014 8216	HF CHOKE 47UH J
OR	613 015 6167	COIL,INDUCTOR 47UHJ
Q1831	405 035 6100	TR 2SC2413K-T96-Q
OR	405 015 9701	TR 2SC2814-F4-TB
Q1832	405 043 8509	TR 2SA1256-E4-TB
OR	405 043 8608	TR 2SA1256-E5-TB
Q1833	405 035 6100	TR 2SC2413K-T96-Q
OR	405 015 9701	TR 2SC2814-F4-TB
Q1834	405 035 6100	TR 2SC2413K-T96-Q
OR	405 015 9701	TR 2SC2814-F4-TB
Q1835	405 043 8509	TR 2SA1256-E4-TB
OR	405 043 8608	TR 2SA1256-E5-TB
Q1836	405 014 4400	TR 2SC2412K-T96-Q
OR	405 014 4509	TR 2SC2412K-T96-R
OR	405 014 4608	TR 2SC2412K-T96-S
OR	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
Q1837	405 043 8509	TR 2SA1256-E4-TB
OR	405 043 8608	TR 2SA1256-E5-TB
Q1838	405 035 6100	TR 2SC2413K-T96-Q
OR	405 015 9701	TR 2SC2814-F4-TB
Q1839	405 043 8509	TR 2SA1256-E4-TB
OR	405 043 8608	TR 2SA1256-E5-TB
Q1840	405 014 4400	TR 2SC2412K-T96-Q
OR	405 014 4509	TR 2SC2412K-T96-R
OR	405 014 4608	TR 2SC2412K-T96-S
OR	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
Q1841	405 035 6100	TR 2SC2413K-T96-Q
OR	405 015 9701	TR 2SC2814-F4-TB
Q1842	405 015 9701	TR 2SC2814-F4-TB
OR	405 035 6100	TR 2SC2413K-T96-Q
Q1850	405 002 0308	TR 2SA1037K-T96-R
OR	405 002 0407	TR 2SA1037K-T96-S
OR	405 002 6508	TR 2SA1179-M5-TB
OR	405 002 6706	TR 2SA1179-M6-TB
Q1851	405 035 6100	TR 2SC2413K-T96-Q
OR	405 015 9701	TR 2SC2814-F4-TB
Q1852	405 002 0308	TR 2SA1037K-T96-R
OR	405 002 0407	TR 2SA1037K-T96-S
OR	405 002 6508	TR 2SA1179-M5-TB
OR	405 002 6706	TR 2SA1179-M6-TB
Q1853	405 035 6100	TR 2SC2413K-T96-Q
OR	405 015 9701	TR 2SC2814-F4-TB
Q1854	405 035 6100	TR 2SC2413K-T96-Q
OR	405 015 9701	TR 2SC2814-F4-TB
Q1855	405 014 4400	TR 2SC2412K-T96-Q
OR	405 014 4509	TR 2SC2412K-T96-R
OR	405 014 4608	TR 2SC2412K-T96-S

LOCATION	PARTS NO.	DESCRIPTION
Q1855	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
Q1872	405 002 0308	TR 2SA1037K-T96-R
OR	405 002 0407	TR 2SA1037K-T96-S
OR	405 002 6508	TR 2SA1179-M5-TB
OR	405 002 6706	TR 2SA1179-M6-TB
Q1893	405 029 3504	TR DTC144EK-T96
OR	405 018 1900	TR 2SC3395-TB
Q1894	405 029 3504	TR DTC144EK-T96
OR	405 018 1900	TR 2SC3395-TB
Q1895	405 029 3504	TR DTC144EK-T96
OR	405 018 1900	TR 2SC3395-TB
Q1896	405 029 3504	TR DTC144EK-T96
OR	405 018 1900	TR 2SC3395-TB
R1801	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R1802	401 038 8103	MT-GLAZE 6.8 JA 1/10W
R1803	401 038 0503	MT-GLAZE 22 JA 1/10W
R1804	401 038 0602	MT-GLAZE 220 JA 1/10W
R1805	401 037 6605	MT-GLAZE 120 JA 1/10W
R1806	401 038 2002	MT-GLAZE 270 JA 1/10W
R1820	401 038 6307	MT-GLAZE 470 JA 1/10W
R1821	401 037 5400	MT-GLAZE 1K JA 1/10W
R1822	401 037 5400	MT-GLAZE 1K JA 1/10W
R1823	401 037 7909	MT-GLAZE 1.5K JA 1/10W
R1824	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R1825	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R1826	401 038 6505	MT-GLAZE 47K JA 1/10W
R1827	401 038 6505	MT-GLAZE 47K JA 1/10W
R1829	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R1830	401 038 9001	MT-GLAZE 680 JA 1/10W
R1831	401 038 0800	MT-GLAZE 22K JA 1/10W
R1832	401 037 5608	MT-GLAZE 10K JA 1/10W
R1833	401 037 5400	MT-GLAZE 1K JA 1/10W
R1834	401 037 9101	MT-GLAZE 180 JA 1/10W
R1835	401 037 9101	MT-GLAZE 180 JA 1/10W
R1836	401 037 9101	MT-GLAZE 180 JA 1/10W
R1837	401 037 5400	MT-GLAZE 1K JA 1/10W
R1838	401 037 5707	MT-GLAZE 100K JA 1/10W
R1839	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R1840	401 038 9407	MT-GLAZE 680K JA 1/10W
R1841	401 037 5707	MT-GLAZE 100K JA 1/10W
R1842	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R1843	401 037 5707	MT-GLAZE 100K JA 1/10W
R1844	401 037 5608	MT-GLAZE 10K JA 1/10W
R1845	401 038 7601	MT-GLAZE 560 JA 1/10W
R1846	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R1847	401 037 5400	MT-GLAZE 1K JA 1/10W
R1848	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R1849	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R1850	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R1851	401 038 3504	MT-GLAZE 330 JA 1/10W
R1852	401 038 0800	MT-GLAZE 22K JA 1/10W
R1853	401 038 0800	MT-GLAZE 22K JA 1/10W
R1854	401 038 5003	MT-GLAZE 390 JA 1/10W
R1855	401 038 5003	MT-GLAZE 390 JA 1/10W
R1856	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R1860	401 037 5202	MT-GLAZE 100 JA 1/10W
R1861	401 038 2200	MT-GLAZE 27K JA 1/10W
R1862	401 038 2200	MT-GLAZE 27K JA 1/10W
R1865	401 038 9001	MT-GLAZE 680 JA 1/10W
R1866	401 038 6505	MT-GLAZE 47K JA 1/10W
R1867	401 038 6505	MT-GLAZE 47K JA 1/10W
R1869	401 037 5400	MT-GLAZE 1K JA 1/10W
R1874	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R1891	401 038 0503	MT-GLAZE 22 JA 1/10W
R1892	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R1894	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R1895	401 038 6406	MT-GLAZE 4.7K JA 1/10W

LOCATION	PARTS NO.	DESCRIPTION
R1896	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R1897	401 038 6406	MT-GLAZE 4.7K JA 1/10W

AUDIO PRE-AMP. CIRCUIT(AP-A)

LOCATION	PARTS NO.	DESCRIPTION
C2901	403 001 1609	CERAMIC 0.01U K 16V
C2902	403 163 8409	ELECT 47U M 16V
C2903	403 001 1609	CERAMIC 0.01U K 16V
C2904	403 001 1609	CERAMIC 0.01U K 16V
C2905	403 001 1609	CERAMIC 0.01U K 16V
C2906	403 001 1609	CERAMIC 0.01U K 16V
C2907	403 001 1609	CERAMIC 0.01U K 16V
C2908	403 163 7907	ELECT 47U M 6.3V
C2909	403 001 1609	CERAMIC 0.01U K 16V
C2910	403 001 1609	CERAMIC 0.01U K 16V
C2911	403 193 8202	ELECT 0.1U M 50V
C2912	403 001 1609	CERAMIC 0.01U K 16V
C2914	403 001 1609	CERAMIC 0.01U K 16V
C2916	403 193 8202	ELECT 0.1U M 50V
C2917	403 121 9509	CERAMIC 0.1U Z 50V
IC291	409 208 5808	IC UPC2350GS
L2901	613 015 6730	COIL,INDUCTOR 100UHK
L2902	613 015 6730	COIL,INDUCTOR 100UHK
R2901	401 012 5609	CARBON 1K JA 1/4W
R2903	401 016 4707	CARBON 22K JA 1/4W
R2904	401 016 4707	CARBON 22K JA 1/4W
R2907	401 012 3308	CARBON 10 JA 1/4W
R2908	401 012 3308	CARBON 10 JA 1/4W
R2911	401 022 6702	CARBON 75 JA 1/4W

COMPL PCB,AD-2

LOCATION	PARTS NO.	DESCRIPTION
COMPL.NO.	613 125 9782	
	613 079 0798	HOLDER,LEVEL METER
	613 108 4247	HOLDER,LED
A2701	613 118 2226	LEVEL METER
C2701	403 139 1007	ELECT 47U M 6.3V
C2702	403 012 6006	CERAMIC 15P J 50V
C2703	403 139 1502	ELECT 10U M 16V
C2705	403 139 1502	ELECT 10U M 16V
C2709	403 139 1502	ELECT 10U M 16V
C2710	403 139 1502	ELECT 10U M 16V
C2711	403 001 1609	CERAMIC 0.01U K 16V
C2712	403 001 1609	CERAMIC 0.01U K 16V
D2701	407 120 2004	LED PG3932SY
D2708	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D2709	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
IC271	409 117 9201	IC BA15218N
JK271	613 087 2791	JACK,MIC
JK272	613 091 4071	JACK,HEADPHONE
L2701	613 014 1200	COIL,INDUCTOR 100UHJ
L2702	613 014 1200	COIL,INDUCTOR 100UHJ
R2701	401 012 6903	CARBON 10K JA 1/4W
R2702	401 012 8006	CARBON 100K JA 1/4W
R2703	401 013 1808	CARBON 11K JA 1/4W
R2704	401 014 6000	CARBON 150K JA 1/4W
R2705	401 012 5609	CARBON 1K JA 1/4W
R2706	401 014 5102	CARBON 15K JA 1/4W
R2709	401 012 6903	CARBON 10K JA 1/4W
R2711	401 012 5609	CARBON 1K JA 1/4W
R2712	401 020 0702	CARBON 470 JA 1/4W
R2731	401 020 0702	CARBON 470 JA 1/4W
R2732	401 020 0702	CARBON 470 JA 1/4W
RR271	613 103 9490	IR RECEIVER PACK UNIT
VR241	613 001 9417	SEMI VR 10KB
OR	613 079 2532	VR,SEMI 10KB
VR242	613 001 9417	SEMI VR 10KB
OR	613 079 2532	VR,SEMI 10KB
VR271	613 111 8010	VR,ROTARY 10K B
OR	613 131 8144	VR,ROTARY 10KB
VR275	613 111 8010	VR,ROTARY 10K B
OR	613 131 8144	VR,ROTARY 10KB

COMPL PCB,AD-3

LOCATION	PARTS NO.	DESCRIPTION
COMPL.NO.	613 125 9799	
S2801	613 081 0922	SLIDE SWITCH 1-2
S2802	613 081 0922	SLIDE SWITCH 1-2
S2803	613 081 0922	SLIDE SWITCH 1-2
VR281	613 091 5450	VR,ROTARY 10KB
OR	613 131 8151	VR,ROTARY 10KB
VR282	613 091 5450	VR,ROTARY 10KB
OR	613 131 8151	VR,ROTARY 10KB

COMPL PCB,CP-B

LOCATION	PARTS NO.	DESCRIPTION
COMPL.NO.	613 126 1365	

TUNER CIRCUIT(TN-B)

LOCATION	PARTS NO.	DESCRIPTION
	613 126 7312	FLEXIBLE FLAT CABLES,CN601
C6006	403 125 5606	ELECT 100U M 16V
C6008	403 109 6308	ELECT 1U M 50V
C6009	403 135 7409	ELECT 22U M 50V
C6010	403 121 9509	CERAMIC 0.1U Z 50V
C6016	403 125 5606	ELECT 100U M 16V
C6017	403 001 1906	CERAMIC 0.01U M 16V
D6001	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D6003	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D6004	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D6005	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D6006	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D6007	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D6013	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D6014	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D6015	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D6016	407 012 4406	DIODE 1SS133-T-77
OR	407 007 9904	DIODE GMA01-BT
D6021	407 078 1104	ZENER DIODE MTZ33A-T-77
OR	407 078 1203	ZENER DIODE MTZ33B-T-77
IC602	409 148 5005	IC M6M80021P

LOCATION	PARTS NO.	DESCRIPTION
Q6002	405 004 4007	TR 2SA608-E-SPA-AC
OR	405 004 4601	TR 2SA608-F-SPA-AC
OR	405 006 1707	TR 2SA933S-TP-Q
OR	405 006 1806	TR 2SA933S-T93-R
OR	405 093 0508	TR KSA1175-Y
Q6003	405 019 2005	TR 2SC536-E-SPA-AC
OR	405 019 2807	TR 2SC536-F-SPA-AC
OR	405 093 0607	TR KSC2785-Y
OR	405 011 8401	TR 2SC1740S-DCTP-Q
OR	405 011 8500	TR 2SC1740S-DCTP-R
Q6007	405 003 7603	TR 2SA1345-AC
OR	405 000 2205	TR DTA144ES-DCTP
Q6008	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
R6001	401 018 2701	CARBON 330 JA 1/4W
R6002	401 019 0904	CARBON 390 JA 1/4W
R6006	401 019 3905	CARBON 390K JA 1/4W
R6007	401 021 4907	CARBON 560K JA 1/4W
R6008	401 012 5609	CARBON 1K JA 1/4W
R6014	401 015 9406	CARBON 2K JA 1/4W
R6015	401 012 6903	CARBON 10K JA 1/4W
R6016	401 012 6903	CARBON 10K JA 1/4W
R6025	401 012 6903	CARBON 10K JA 1/4W
R6027	401 012 6903	CARBON 10K JA 1/4W

TIMER CIRCUIT(TM-B)

	613 126 7336	FLEXIBLE FLAT CABLES,CN701
C7001	403 155 2804	DL-ELECT 0.047F Z 5.5V
OR	403 212 9104	DL-ELECT 0.1F Z 5.5V
D7001	407 120 5807	DIODE AK04-V2
R7001	401 012 6903	CARBON 10K JA 1/4W
R7002	401 012 6903	CARBON 10K JA 1/4W
R7003	401 012 6903	CARBON 10K JA 1/4W
R7004	401 012 6903	CARBON 10K JA 1/4W
R7007	401 012 6903	CARBON 10K JA 1/4W
R7018	401 012 5609	CARBON 1K JA 1/4W
R7019	401 012 5609	CARBON 1K JA 1/4W
RB701	613 079 5885	R-NETWORK,10KX5
OR	613 017 2860	RESISTOR PACK

RF CONVERTER CIRCUIT(CV-B)

C6601	403 134 8100	ELECT 100U M 6.3V
C6602	403 134 8100	ELECT 100U M 6.3V
L6601	613 014 8667	HF CHOKE 15UH K
OR	613 015 6631	COIL,INDUCTOR 15UHK
L6602	613 014 0739	COIL,INDUCTOR 1.0UHM
OR	613 014 4256	HF CHOKE 1.0UH K
R6603	401 016 3700	CARBON 2.2K JA 1/4W
R6604	401 019 1802	CARBON 3.9K JA 1/4W

COMPL PCB,PW-1

COMPL.NO. 613 124 7314

LOCATION	PARTS NO.	DESCRIPTION
C5001	404 044 7900	MT-POLYEST 0.22U M 250V
C5002 ⚠	404 044 7009	MT-POLYEST 0.068U M 250V
C5003	404 052 4304	ELECT 62U M 400V
OR	404 053 6505	ELECT 56U M 400V
C5004	403 183 3309	MT-POLYEST 0.047U M 630V
C5005	403 137 5007	CERAMIC 100P K 1K
OR	403 137 5007	CERAMIC 100P K 1K
C5007	403 222 1808	ELECT 1U M 400V
C5008	403 094 0800	OS-SOLID 2.2U M 16V
C5009	403 061 7702	POLYESTER 4700P J 50V
C5010	403 018 6208	CERAMIC 220P J 50V
OR	403 214 9706	CERAMIC 220P J 50V
C5011	403 001 5003	CERAMIC 2200P K 16V
C5012	403 058 9504	POLYESTER 0.018U J 50V
C5013	403 058 9504	POLYESTER 0.018U J 50V
C5020 ⚠	404 034 7507	CERAMIC 2200P M 400V
OR ⚠	404 032 6304	CERAMIC 2200P M 400V
C5021 ⚠	404 034 7507	CERAMIC 2200P M 400V
OR ⚠	404 032 6304	CERAMIC 2200P M 400V
C5022	404 034 7507	CERAMIC 2200P M 400V
OR	404 032 6304	CERAMIC 2200P M 400V
C5023	404 034 7507	CERAMIC 2200P M 400V
OR	404 032 6304	CERAMIC 2200P M 400V
C5101	403 205 2105	ELECT 1200U M 16V
C5102	403 160 7207	ELECT 470U M 16V
C5104	403 205 2105	ELECT 1200U M 16V
C5105	403 147 9507	ELECT 470U M 6.3V
OR	403 160 2905	ELECT 470U M 6.3V
C5106	403 121 6607	ELECT 47U M 50V
OR	403 154 8302	ELECT 47U M 50V
C5107	403 121 6607	ELECT 47U M 50V
OR	403 154 8302	ELECT 47U M 50V
C5108	403 160 2400	ELECT 330U M 6.3V
OR	403 155 5508	ELECT 330U M 6.3V
C5109	403 004 0500	CERAMIC 0.047U K 25V
C5110	403 168 6103	MT-POLYEST 0.1U J 50V
C5111	403 125 5606	ELECT 100U M 16V
C5114	403 001 1906	CERAMIC 0.01U M 16V
C5115	403 135 4002	ELECT 47U M 6.3V
CN501	613 120 7912	CONNECTOR,INLET
D5001	407 010 9403	DIODE S1WBA60
OR	407 134 8900	DIODE DBC10G
D5003	407 091 6704	DIODE AP01C-V0
D5004	407 078 2705	DIODE 1SS244-T-77
D5005	407 078 2705	DIODE 1SS244-T-77
D5006	407 050 9302	ZENER DIODE GZB18C
D5007	407 078 2705	DIODE 1SS244-T-77
D5008	407 078 2705	DIODE 1SS244-T-77
D5009	407 006 0902	DIODE ERB12-02U14ATP
D5010	407 136 8809	DIODE ERA15-04A-V5
OR	407 004 9808	DIODE DSK10E-BT
D5011	407 097 0300	PHOTO COUPLE PC113A
D5101	407 100 9108	DIODE DLE30C-KC9
D5104	407 100 6909	DIODE AG01-V2
OR	407 091 6902	DIODE ERA38-04-V5
D5105	407 078 2705	DIODE 1SS244-T-77
D5106	407 078 2705	DIODE 1SS244-T-77
D5107	407 100 6909	DIODE AG01-V2
OR	407 091 6902	DIODE ERA38-04-V5
D5108	407 004 9709	DIODE DSK10C-BT
OR	407 005 8701	DIODE ERA15-02-V5
D5109	407 099 5105	ZENER DIODE MTZJ4.7B-T-77
D5110	407 012 4406	DIODE 1SS133-T-77
D5111	407 099 5204	ZENER DIODE MTZJ5.1B-T-77
D5113	407 051 4801	ZENER DIODE GZS2.0X-BT
OR	407 125 9008	ZENER DIODE MTZJ2.0A-T-77
D5114	407 099 6508	ZENER DIODE MTZJ12A-T-77
D5115	407 099 6508	ZENER DIODE MTZJ12A-T-77
D5120	407 142 1108	DIODE RK44 LF-M1
F5001 ⚠	423 006 1305	FUSE 250V 2A
IC511	409 067 7203	IC L5431-AA
IC512	409 234 7005	IC SI-3120CA

LOCATION	PARTS NO.	DESCRIPTION
L5001 ⚠	613 080 0664	LF CHOKE
OR ⚠	613 119 9828	COIL,LINE FILTER
L5002 ⚠	613 013 1362	LF CHOKE
L5101	613 017 0354	CORE
L5102	613 110 4198	COIL,INDUCTOR 10UH K
PR511 ⚠	613 000 2327	CIRCUIT PROTECTOR
PR512 ⚠	613 000 2327	CIRCUIT PROTECTOR
Q5001	405 103 7909	TR 2SK1460-YA
Q5002	405 017 9600	TR 2SC3330-T-AC
Q5003	405 105 0700	TR 2SB1050-R
Q5101	405 088 9103	TR 2SA1703-S-AN
OR	405 108 6907	TR 2SB1322A-R(TA)
OR	405 108 7003	TR 2SB1322A-S(TA)
Q5102	405 107 4102	TR 2SD1994-R (TA)
OR	405 107 4201	TR 2SD1994-S (TA)
OR	405 089 2103	TR 2SC4483-S-AN
Q5103	405 035 6902	TR 2SC3851-O
OR	405 035 7008	TR 2SC3851-Y
Q5104	405 019 1909	TR 2SC536-E-NP-AA
OR	405 019 2708	TR 2SC536-F-NP-AA
R5001	401 001 8000	SOLID 2.7M MA 1/2W
OR	401 001 7904	SOLID 2.7M KA 1/2W
R5002	401 080 0605	WIRE WOUND 2.2 KA 2W
R5003	401 069 4402	OXIDE-MT 68K JA 2W
R5004	401 069 4402	OXIDE-MT 68K JA 2W
R5005	401 090 4709	OXIDE-MT 220K JA 1W
R5006	401 090 1104	CARBON 1M JA 1/2W
R5007	401 009 5001	CARBON 33 JA 1/2W
R5008	401 007 0305	CARBON 100 JA 1/2W
R5009	401 020 2805	CARBON 47K JA 1/4W
R5010	401 012 5609	CARBON 1K JA 1/4W
R5011	401 011 8809	CARBON 1 JA 1/4W
R5012	401 016 1409	CARBON 22 JA 1/4W
R5013	401 012 6903	CARBON 10K JA 1/4W
R5014	401 017 2702	CARBON 27K JA 1/4W
R5015	401 057 5107	OXIDE-MT 0.47 JA 1W
R5101 ⚠	402 004 0909	FUSIBLE RES 2.7 JA 1/4W
R5102 ⚠	402 004 1302	FUSIBLE RES 220 JA 1/4W
R5103	401 016 3700	CARBON 2.2K JA 1/4W
R5104	401 015 2605	CARBON 1.8K JA 1/4W
R5105	401 107 6009	MT-FILM 1.6K FD 1/4W
R5106	401 107 1707	MT-FILM 2.2K FD 1/4W
R5107	401 012 4404	CARBON 100 JA 1/4W
R5108	401 014 5102	CARBON 15K JA 1/4W
R5109	401 021 8905	CARBON 6.2K JA 1/4W
R5110	401 016 3700	CARBON 2.2K JA 1/4W
R5111	401 012 5609	CARBON 1K JA 1/4W
R5112	401 016 3700	CARBON 2.2K JA 1/4W
R5113	401 016 3700	CARBON 2.2K JA 1/4W
R5114	401 011 5709	CARBON 820 JA 1/2W
R5115	401 011 5709	CARBON 820 JA 1/2W
R5117	401 013 6308	CARBON 12K JA 1/4W
T5001 ⚠	613 126 5172	TRANS,SW
OR ⚠	613 128 3824	TRANS,SW

IF PACK

LOCATION	PARTS NO.	DESCRIPTION
COMPL.NO.	613 108 3578	
C6103	403 009 5906	CERAMIC 100P J 50V
C6104	403 069 9500	CERAMIC 0.01U Z 50V
C6105	403 069 9500	CERAMIC 0.01U Z 50V
C6106	403 069 9500	CERAMIC 0.01U Z 50V
C6107	403 069 9500	CERAMIC 0.01U Z 50V
C6108	403 032 5300	CERAMIC 8P C 50V
C6109	403 042 3006	ELECT 100U M 16V
C6110	403 069 9500	CERAMIC 0.01U Z 50V
C6111	403 068 0409	CERAMIC 0.1U Z 25V
C6112	403 069 1702	CERAMIC 1000P K 50V
C6113	403 050 0509	ELECT 2.2U M 50V
C6114	403 069 9500	CERAMIC 0.01U Z 50V
C6115	403 022 8403	CERAMIC 33P J 50V
C6116	403 069 9500	CERAMIC 0.01U Z 50V
C6117	403 048 4809	ELECT 0.33U M 50V
C6118	403 069 9500	CERAMIC 0.01U Z 50V
C6119	403 068 0409	CERAMIC 0.1U Z 25V
C6120	403 068 0409	CERAMIC 0.1U Z 25V
C6123	403 069 9500	CERAMIC 0.01U Z 50V
C6124	403 042 3006	ELECT 100U M 16V
C6130	403 069 9500	CERAMIC 0.01U Z 50V
C6131	403 069 9500	CERAMIC 0.01U Z 50V
C6132	403 010 8705	CERAMIC 12P J 50V
C6133	403 030 7405	CERAMIC 68P J 50V
C6134	403 068 0409	CERAMIC 0.1U Z 25V
C6136	403 014 3607	CERAMIC 18P J 50V
C6137	403 188 1805	CERAMIC 93P H 50V
C6138	403 048 6902	ELECT 0.47U M 50V
C6139	403 022 8403	CERAMIC 33P J 50V
C6140	403 049 0800	ELECT 1U M 50V
C6141	403 008 7604	CERAMIC 10P D 50V
C6143	403 073 4201	CERAMIC 3900P K 50V
C6144	403 047 0604	ELECT 4.7U M 25V
C6147	403 069 9500	CERAMIC 0.01U Z 50V
C6148	403 042 3006	ELECT 100U M 16V
C6149	403 033 4708	CERAMIC 82P J 50V
C6150	403 069 9500	CERAMIC 0.01U Z 50V
C6151	403 069 9500	CERAMIC 0.01U Z 50V
C6155	403 069 9500	CERAMIC 0.01U Z 50V
C6161	403 032 8608	CERAMIC 8P D 50V
C6162	403 032 8608	CERAMIC 8P D 50V
C6164	403 022 8403	CERAMIC 33P J 50V
C6165	403 025 1807	CERAMIC 4P C 50V
C6166	403 025 1807	CERAMIC 4P C 50V
C6167	403 008 7604	CERAMIC 10P D 50V
C6168	403 109 9200	CERAMIC 27P J 50V
C6170	403 008 7604	CERAMIC 10P D 50V
D6101	407 053 8906	ZENER DIODE MTZ9.1C
IC611	409 036 0105	IC M51366SP
IC612	409 056 6903	IC UPC1391HAMS
J6107	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
J6108	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
J6109	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6112	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6116	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6117	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
J6118	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
L6101	613 103 3986	TRANS,IF
L6102	613 014 0753	COIL,INDUCTOR 1.5UHM
L6103	613 014 0722	COIL,INDUCTOR 0.82UHM
L6104	613 014 0807	COIL,INDUCTOR 3.9UHK
L6105	613 014 0913	COIL,INDUCTOR 33UHK
L6106	613 095 2462	TRANS,IF
L6107	613 103 3979	TRANS,IF
L6108	613 014 0845	COIL,INDUCTOR 8.2UHK
L6109	613 088 8396	TRANS,IF
L6110	613 119 5653	TRANS,IF
L6111	613 014 0692	COIL,INDUCTOR 0.47UHM
L6113	613 119 3932	TRANS,IF
L6114	613 119 3932	TRANS,IF
Q6101	405 090 3304	TR 2SC3838K-ADP-T96

LOCATION	PARTS NO.	DESCRIPTION
Q6102	405 004 3901	TR 2SA608-E-NP
Q6103	405 090 3304	TR 2SC3838K-ADP-T96
Q6105	405 015 8407	TR 2SC2812-L5-TB
R6101	402 023 4506	FUSIBLE RES 27 JA 1/2W
R6102	401 038 6307	MT-GLAZE 470 JA 1/10W
R6103	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R6104	401 037 6704	MT-GLAZE 1.2K JA 1/10W
R6105	401 038 0503	MT-GLAZE 22 JA 1/10W
R6106	401 037 9101	MT-GLAZE 180 JA 1/10W
R6107	401 037 9101	MT-GLAZE 180 JA 1/10W
R6109	401 038 3603	MT-GLAZE 3.3K JA 1/10W
R6110	401 038 3801	MT-GLAZE 330K JA 1/10W
R6111	401 037 9309	MT-GLAZE 18K JA 1/10W
R6112	401 038 3801	MT-GLAZE 330K JA 1/10W
R6113	401 038 7809	MT-GLAZE 56K JA 1/10W
R6114	401 038 9209	MT-GLAZE 6.8K JA 1/10W
R6115	401 038 5102	MT-GLAZE 3.9K JA 1/10W
R6116	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R6117	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R6118	401 038 2101	MT-GLAZE 2.7K JA 1/10W
R6119	401 038 2101	MT-GLAZE 2.7K JA 1/10W
R6120	401 037 7909	MT-GLAZE 1.5K JA 1/10W
R6121	401 039 0601	MT-GLAZE 820K JA 1/10W
R6122	401 039 0403	MT-GLAZE 8.2K JA 1/10W
R6123	401 038 3504	MT-GLAZE 330 JA 1/10W
R6124	401 039 0403	MT-GLAZE 8.2K JA 1/10W
R6125	401 038 3504	MT-GLAZE 330 JA 1/10W
R6126	401 037 5400	MT-GLAZE 1K JA 1/10W
R6127	401 036 8105	MT-GLAZE 470 JA 1/8W
R6128	401 037 1709	MT-GLAZE 68 JA 1/8W
R6129	401 037 5202	MT-GLAZE 100 JA 1/10W
R6130	401 038 3702	MT-GLAZE 33K JA 1/10W
R6136	401 038 6307	MT-GLAZE 470 JA 1/10W
R6137	401 038 7205	MT-GLAZE 5.1K JA 1/10W
R6138	401 038 6208	MT-GLAZE 47 JA 1/10W
R6139	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R6140	401 037 5608	MT-GLAZE 10K JA 1/10W
R6141	401 037 5608	MT-GLAZE 10K JA 1/10W
R6142	401 037 5400	MT-GLAZE 1K JA 1/10W
R6144	401 037 5202	MT-GLAZE 100 JA 1/10W
R6145	401 039 0304	MT-GLAZE 820 JA 1/10W
R6146	401 038 6208	MT-GLAZE 47 JA 1/10W
R6147	401 038 6505	MT-GLAZE 47K JA 1/10W
R6148	401 037 6704	MT-GLAZE 1.2K JA 1/10W
R6149	401 038 0602	MT-GLAZE 220 JA 1/10W
R6152	401 037 5400	MT-GLAZE 1K JA 1/10W
R6153	401 038 5003	MT-GLAZE 390 JA 1/10W
R6154	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R6155	401 037 5400	MT-GLAZE 1K JA 1/10W
R6158	401 037 5400	MT-GLAZE 1K JA 1/10W
R6161	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R6163	401 038 6307	MT-GLAZE 470 JA 1/10W
R6164	401 038 3504	MT-GLAZE 330 JA 1/10W
R6165	401 038 3504	MT-GLAZE 330 JA 1/10W
R6166	401 098 7603	MT-GLAZE 2.2 JA 1/10W
R6167	401 037 9101	MT-GLAZE 180 JA 1/10W
R6170	401 037 5202	MT-GLAZE 100 JA 1/10W
R6171	401 037 6605	MT-GLAZE 120 JA 1/10W
VR611	613 002 1137	SEMI VR 1KB
X6101	421 003 1007	SAW F TSF1342L
X6102	422 000 8204	SAW F SAF33.0MC70Z
X6104	613 119 3918	TRAP,5.5MHZ
X6105	613 088 8372	FILTER,5.85M
X6107	613 084 1704	FILTER
X6110	613 119 3925	FILTER,5.74MHZ B.P
X6111	613 086 1191	DISCR,CERAMIC

LOCATION	PARTS NO.	DESCRIPTION
X6112	613 092 4797	FILTER
DECODER		
COMPL.NO.	613 104 3091	
B6301	405 018 1900	TR 2SC3395-TB
B6302	405 018 2006	TR 2SC3396-TB
B6303	405 018 2402	TR 2SC3398-TB
B6304	405 018 1900	TR 2SC3395-TB
B6305	405 018 1900	TR 2SC3395-TB
C6301	403 047 0604	ELECT 4.7U M 25V
C6302	403 047 0604	ELECT 4.7U M 25V
C6303	403 047 0604	ELECT 4.7U M 25V
C6304	403 067 7706	MT-COMPO 0.047U J 50V
C6305	403 067 7706	MT-COMPO 0.047U J 50V
C6306	403 067 7706	MT-COMPO 0.047U J 50V
C6307	403 069 9500	CERAMIC 0.01U Z 50V
C6308	403 046 2104	ELECT 3.3U M 25V
C6309	403 042 8308	ELECT 22U M 16V
C6310	403 067 7805	MT-COMPO 0.47U J 50V
C6311	403 067 7409	MT-COMPO 0.039U J 50V
C6312	403 067 7409	MT-COMPO 0.039U J 50V
C6313	403 067 7409	MT-COMPO 0.039U J 50V
C6314	403 067 7409	MT-COMPO 0.039U J 50V
C6315	403 050 0509	ELECT 2.2U M 50V
C6316	403 042 3006	ELECT 100U M 16V
C6317	403 069 9500	CERAMIC 0.01U Z 50V
C6318	403 069 9500	CERAMIC 0.01U Z 50V
C6319	403 042 3006	ELECT 100U M 16V
D6301	407 004 8009	DIODE DSB015-TB
IC631	409 135 9108	IC TDA3803A
J6301	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6302	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
L6301	613 084 7683	HF CHOKE 54.7KHZ
Q6301	405 015 8308	TR 2SC2812-L4-TB
OR	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
Q6302	405 015 8308	TR 2SC2812-L4-TB
OR	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
Q6303	405 015 8308	TR 2SC2812-L4-TB
OR	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
R6301	401 037 5400	MT-GLAZE 1K JA 1/10W
R6302	401 037 5400	MT-GLAZE 1K JA 1/10W
R6303	401 037 5608	MT-GLAZE 10K JA 1/10W
R6304	401 039 1004	MT-GLAZE 9.1K JA 1/10W
R6305	401 037 5608	MT-GLAZE 10K JA 1/10W
R6306	401 037 5400	MT-GLAZE 1K JA 1/10W
R6307	401 037 5400	MT-GLAZE 1K JA 1/10W
R6308	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R6309	401 038 7809	MT-GLAZE 56K JA 1/10W
R6310	401 108 3007	MT-GLAZE 1M FD 1/10W
R6311	401 108 3106	MT-GLAZE 330K FD 1/10W
R6312	401 108 3106	MT-GLAZE 330K FD 1/10W
R6313	401 108 3205	MT-GLAZE 620K FD 1/10W
R6314	401 152 4708	MT-GLAZE 150K FD 1/10W
R6315	401 020 0801	CARBON 470 JA 1/4W
R6316	401 020 0801	CARBON 470 JA 1/4W
R6317	401 024 7004	CARBON 1K JA 1/6W
R6318	401 037 5400	MT-GLAZE 1K JA 1/10W
R6319	401 037 5202	MT-GLAZE 100 JA 1/10W

LOCATION	PARTS NO.	DESCRIPTION
R6331	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R6332	401 038 9001	MT-GLAZE 680 JA 1/10W
R6333	401 038 0602	MT-GLAZE 220 JA 1/10W
VR631	613 001 4986	SEMI VR 5KB
VR632	613 002 1397	SEMI VR 500B
VR633	613 002 1380	SEMI VR 200B

COMPL PCB,TN-5

LOCATION	PARTS NO.	DESCRIPTION
COMPL.NO.	613 123 0873	(NICAM OPTION)
C6701	403 069 5601	CERAMIC 0.01U K 50V
C6702	403 038 2006	ELECT 100U M 6.3V
C6703	403 069 5601	CERAMIC 0.01U K 50V
C6704	403 043 9601	ELECT 47U M 16V
C6705	403 041 9405	ELECT 10U M 16V
C6706	403 069 5601	CERAMIC 0.01U K 50V
C6707	403 158 5604	NP-ELECT 0.47U M 50V
C6709	403 017 0900	CERAMIC 20P J 50V
C6710	403 018 0503	CERAMIC 22P J 50V
C6711	403 069 5601	CERAMIC 0.01U K 50V
C6712	403 069 5601	CERAMIC 0.01U K 50V
C6713	403 069 5601	CERAMIC 0.01U K 50V
C6714	403 069 5601	CERAMIC 0.01U K 50V
C6715	403 038 2006	ELECT 100U M 6.3V
C6716	403 069 5601	CERAMIC 0.01U K 50V
C6717	403 048 6902	ELECT 0.47U M 50V
C6718	403 068 0409	CERAMIC 0.1U Z 25V
C6719	403 068 0409	CERAMIC 0.1U Z 25V
C6720	403 048 6902	ELECT 0.47U M 50V
C6721	403 069 5601	CERAMIC 0.01U K 50V
C6722	403 028 4102	CERAMIC 56P J 50V
C6726	403 018 0503	CERAMIC 22P J 50V
C6727	403 018 0503	CERAMIC 22P J 50V
C6728	403 069 5601	CERAMIC 0.01U K 50V
C6729	403 038 9708	ELECT 330U M 6.3V
C6730	403 062 8302	POLYESTER 680P J 50V
C6731	403 039 2609	ELECT 47U M 6.3V
C6732	403 087 3801	STYRENE 1200P J 50V
C6733	403 038 6707	ELECT 220U M 6.3V
C6734	403 087 3801	STYRENE 1200P J 50V
C6735	403 038 2006	ELECT 100U M 6.3V
C6736	403 039 2609	ELECT 47U M 6.3V
C6737	403 062 8302	POLYESTER 680P J 50V
C6738	403 041 9405	ELECT 10U M 16V
C6739	403 041 9405	ELECT 10U M 16V
C6740	403 041 9405	ELECT 10U M 16V
C6741	403 041 9405	ELECT 10U M 16V
C6742	403 041 9405	ELECT 10U M 16V
C6743	403 041 9405	ELECT 10U M 16V
C6744	403 043 9601	ELECT 47U M 16V
C6745	403 046 2104	ELECT 3.3U M 25V
C6746	403 046 2104	ELECT 3.3U M 25V
C6747	403 046 2104	ELECT 3.3U M 25V
C6748	403 046 2104	ELECT 3.3U M 25V
C6750	403 028 1606	CERAMIC 56P J 50V
C6751	403 022 8205	CERAMIC 33P J 50V
D6701	407 003 3609	DIODE DAN202K-T-96
OR	407 004 0706	DIODE DCB015-TB
D6702	407 003 3609	DIODE DAN202K-T-96
OR	407 004 0706	DIODE DCB015-TB
D6703	407 003 4507	DIODE DAP202K-T-96
D6704	407 003 3609	DIODE DAN202K-T-96
OR	407 004 0706	DIODE DCB015-TB
D6705	407 003 3609	DIODE DAN202K-T-96
OR	407 004 0706	DIODE DCB015-TB
D6706	407 003 3609	DIODE DAN202K-T-96
OR	407 004 0706	DIODE DCB015-TB

LOCATION	PARTS NO.	DESCRIPTION
IC671	409 248 5202	IC TB1210F
IC672	409 163 2102	IC TD6710AN
IC673	409 051 3006	IC TC4053BP
IC674	409 018 5203	IC LA6462D
IC675	409 018 5203	IC LA6462D
J6702	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6703	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6704	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6705	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6706	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6707	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6708	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6709	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6710	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6711	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6712	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6713	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6714	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
J6715	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
L6701	613 014 0777	COIL,INDUCTOR 2.2UHM
L6702	613 014 0777	COIL,INDUCTOR 2.2UHM
L6703	613 014 0777	COIL,INDUCTOR 2.2UHM
L6704	613 014 0777	COIL,INDUCTOR 2.2UHM
Q6701	405 060 7509	TR FMG2-T98
Q6702	405 060 7202	TR FMA2-T148
Q6703	405 060 7509	TR FMG2-T98
Q6704	405 015 9701	TR 2SC2814-F4-TB
OR	405 078 0400	TR 2SC2413K-T96-P
Q6705	405 058 5401	TR FMC2-T98
Q6706	405 015 8308	TR 2SC2812-L4-TB
OR	405 015 8407	TR 2SC2812-L5-TB
OR	405 014 4400	TR 2SC2412K-T96-Q
OR	405 014 4509	TR 2SC2412K-T96-R
Q6707	405 060 7509	TR FMG2-T98
R6701	401 037 5608	MT-GLAZE 10K JA 1/10W
R6702	401 037 5608	MT-GLAZE 10K JA 1/10W
R6703	401 038 5102	MT-GLAZE 3.9K JA 1/10W
R6704	401 037 5400	MT-GLAZE 1K JA 1/10W
R6705	401 037 5608	MT-GLAZE 10K JA 1/10W
R6706	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R6707	401 037 5202	MT-GLAZE 100 JA 1/10W
R6708	401 038 2002	MT-GLAZE 270 JA 1/10W
R6709	401 037 7800	MT-GLAZE 150 JA 1/10W
R6710	401 038 3702	MT-GLAZE 33K JA 1/10W
R6711	401 038 9001	MT-GLAZE 680 JA 1/10W
R6712	401 038 0602	MT-GLAZE 220 JA 1/10W
R6713	401 038 9001	MT-GLAZE 680 JA 1/10W
R6714	401 037 5608	MT-GLAZE 10K JA 1/10W
R6715	401 038 0909	MT-GLAZE 220K JA 1/10W
R6716	401 038 5300	MT-GLAZE 39K JA 1/10W
R6717	401 038 0107	MT-GLAZE 2K JA 1/10W
R6718	401 038 9308	MT-GLAZE 68K JA 1/10W
R6719	401 038 2101	MT-GLAZE 2.7K JA 1/10W
R6720	401 038 6505	MT-GLAZE 47K JA 1/10W
R6721	401 038 0800	MT-GLAZE 22K JA 1/10W
R6722	401 038 0800	MT-GLAZE 22K JA 1/10W
R6723	401 037 5608	MT-GLAZE 10K JA 1/10W
R6724	401 037 5608	MT-GLAZE 10K JA 1/10W
R6725	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R6726	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R6727	401 037 5400	MT-GLAZE 1K JA 1/10W
R6728	401 038 2200	MT-GLAZE 27K JA 1/10W
R6729	401 039 0403	MT-GLAZE 8.2K JA 1/10W
R6730	401 037 5400	MT-GLAZE 1K JA 1/10W
R6731	401 037 5400	MT-GLAZE 1K JA 1/10W

LOCATION	PARTS NO.	DESCRIPTION
R6732	401 038 2200	MT-GLAZE 27K JA 1/10W
R6733	401 039 0403	MT-GLAZE 8.2K JA 1/10W
R6734	401 037 5400	MT-GLAZE 1K JA 1/10W
R6736	401 038 6505	MT-GLAZE 47K JA 1/10W
R6737	401 037 5608	MT-GLAZE 10K JA 1/10W
R6738	401 037 5608	MT-GLAZE 10K JA 1/10W
R6740	401 038 6109	MT-GLAZE 430K JA 1/10W
X6701	613 123 4154	OSC,CRYSTAL 11.648MHZ
X6702	613 084 3241	OSC CRYSTAL,5.85MHZ
X6703	613 084 3258	RESONATOR,CERAMIC 16.93M
XF671	613 084 3166	FILTER,5.85MHZ
XF672	613 123 1481	FILTER,14KHZ

COMPL PCB,TN-7

COMPL.NO.	613 127 8035	
B6901	405 018 1900	TR 2SC3395-TB
OR	405 029 3504	TR DTC144EK-T96
C6901	403 068 0409	CERAMIC 0.1U Z 25V
OR	403 116 2508	CERAMIC 0.1U Z 25V
C6902	403 189 2405	ELECT 10U M 16V
C6903	403 072 3403	CERAMIC 0.022U Z 50V
C6904	403 193 8400	ELECT 0.22U M 50V
C6921	403 068 0409	CERAMIC 0.1U Z 25V
OR	403 116 2508	CERAMIC 0.1U Z 25V
D6901	407 004 0706	DIODE DCB015-TB
OR	407 003 3609	DIODE DAN202K-T-96
D6902	407 003 5108	DIODE DA204K-T96
J6901	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
Q6901	405 015 8308	TR 2SC2812-L4-TB
OR	405 015 8407	TR 2SC2812-L5-TB
OR	405 014 4400	TR 2SC2412K-T96-Q
OR	405 014 4509	TR 2SC2412K-T96-R
OR	405 015 8704	TR 2SC2812-L6-TB
Q6902	405 030 7201	TR 2SA1338-4-TB
OR	405 030 7300	TR 2SA1338-5-TB
Q6903	405 015 8308	TR 2SC2812-L4-TB
OR	405 015 8407	TR 2SC2812-L5-TB
OR	405 014 4400	TR 2SC2412K-T96-Q
OR	405 014 4509	TR 2SC2412K-T96-R
OR	405 015 8704	TR 2SC2812-L6-TB
R6901	401 037 5400	MT-GLAZE 1K JA 1/10W
R6902	401 038 3504	MT-GLAZE 330 JA 1/10W
R6903	401 038 8509	MT-GLAZE 620 JA 1/10W
R6904	401 037 5608	MT-GLAZE 10K JA 1/10W
R6905	401 038 3801	MT-GLAZE 330K JA 1/10W
R6906	401 037 5608	MT-GLAZE 10K JA 1/10W
R6907	401 038 3603	MT-GLAZE 3.3K JA 1/10W
R6908	401 039 0205	MT-GLAZE 82 JA 1/10W
R6909	401 037 5400	MT-GLAZE 1K JA 1/10W
R6910	401 038 7106	MT-GLAZE 510 JA 1/10W
R6911	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R6912	401 038 5102	MT-GLAZE 3.9K JA 1/10W
T6901	613 109 0958	TRANS,IF
OR	613 109 0965	TRANS,IF

COMPL PCB,TM-1

LOCATION	PARTS NO.	DESCRIPTION
COMPL.NO.	613 125 9768	
	613 108 4230	HOLDER
A7101	613 113 2672	FLUORESCENT TUBE
C7101	403 021 7308	CERAMIC 3.3P K 50V
C7102	403 014 2501	CERAMIC 18P J 50V
C7103	403 017 0108	CERAMIC 20P J 50V
C7104	403 001 1906	CERAMIC 0.01U M 16V
C7105	403 139 1601	ELECT 22U M 16V
C7106	403 001 1906	CERAMIC 0.01U M 16V
C7107	403 001 1906	CERAMIC 0.01U M 16V
C7108	403 139 1502	ELECT 10U M 16V
C7111	403 121 9509	CERAMIC 0.1U Z 50V
C7113	403 139 1502	ELECT 10U M 16V
D7103	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7104	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7105	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7106	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7107	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7108	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7109	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7110	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7118	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7120	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7123	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7125	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
D7129	407 007 9904	DIODE GMA01-BT
OR	407 012 4406	DIODE 1SS133-T-77
IC711	409 251 0805	IC M50959-439SP
IC712	409 032 3308	IC MN1280-L
OR	409 243 4101	IC MN1380-L
Q7101	405 063 9609	TR DTA114EL-TL2
R7101	401 012 9201	CARBON 1M JA 1/4W
R7102	401 110 6201	CARBON 10M JA 1/4W
R7103	401 018 5702	CARBON 330K JA 1/4W
R7104	401 012 5609	CARBON 1K JA 1/4W
R7106	401 012 5609	CARBON 1K JA 1/4W
R7108	401 012 5609	CARBON 1K JA 1/4W
R7110	401 012 5609	CARBON 1K JA 1/4W
R7116	401 016 4707	CARBON 22K JA 1/4W
R7117	401 012 6903	CARBON 10K JA 1/4W
R7122	401 012 5609	CARBON 1K JA 1/4W
R7123	401 012 5609	CARBON 1K JA 1/4W
R7124	401 014 4006	CARBON 1.5K JA 1/4W
RB711	613 079 5878	R-NETWORK,10KX4
OR	613 017 2853	RESISTOR PACK 10K X4 J
X7101	613 122 1444	RESONATOR,CERAMIC 6.0MHZ
OR	613 124 2135	RESONATOR,CERAMIC 6MHZ
OR	613 089 4069	RESONATOR,CERAMIC 6MHZ
OR	613 108 9570	RESONATOR,CERAMIC 6MHZ
X7102	613 109 0972	OSC,CRYSTAL 32KHZ

COMPL PCB,TN-6

LOCATION	PARTS NO.	DESCRIPTION
COMPL.NO.	613 124 3378	(VPT OPTION)
B7601	405 018 2402	TR 2SC3398-TB
C7601	403 155 2804	DL-ELECT 0.047F Z 5.5V
C7602	403 041 2703	ELECT 47U M 10V
C7603	403 039 3507	ELECT 470U M 6.3V
C7604	403 069 9500	CERAMIC 0.01U Z 50V
C7605	403 069 9500	CERAMIC 0.01U Z 50V
C7606	403 069 9500	CERAMIC 0.01U Z 50V
C7609	403 041 9405	ELECT 10U M 16V
C7610	403 069 9500	CERAMIC 0.01U Z 50V
C7611	403 069 9500	CERAMIC 0.01U Z 50V
C7625	403 041 2109	ELECT 47U M 10V
C7640	403 012 6808	CERAMIC 15P J 50V
C7642	403 069 9500	CERAMIC 0.01U Z 50V
C7643	403 069 9500	CERAMIC 0.01U Z 50V
C7644	403 049 0800	ELECT 1U M 50V
C7646	403 043 9106	ELECT 47U M 16V
C7651	403 161 6902	NP-ELECT 2.2U M 50V
C7652	403 012 6907	CERAMIC 15P J 50V
C7653	403 069 1702	CERAMIC 1000P K 50V
C7654	403 026 7600	CERAMIC 470P J 50V
C7655	403 072 1607	CERAMIC 0.022U K 50V
C7656	403 020 5602	CERAMIC 270P J 50V
C7657	403 009 5807	CERAMIC 100P J 50V
C7658	403 012 6907	CERAMIC 15P J 50V
C7659	403 020 0508	CERAMIC 27P J 50V
C7660	403 067 7300	MT-COMPO 0.33U J 50V
C7661	403 068 3202	CERAMIC 0.033U K 25V
C7662	403 049 0800	ELECT 1U M 50V
C7663	403 041 9405	ELECT 10U M 16V
C7664	403 073 1200	CERAMIC 0.033U K 50V
C7665	403 014 3508	CERAMIC 18P J 50V
C7666	403 018 0602	CERAMIC 22P J 50V
C7667	403 018 7502	CERAMIC 220P J 50V
C7668	403 130 4106	CERAMIC 0.068U K 25V
OR	403 228 7408	CERAMIC 0.068U K 25V
C7669	403 043 9601	ELECT 47U M 16V
C7670	403 069 9500	CERAMIC 0.01U Z 50V
C7671	403 069 9500	CERAMIC 0.01U Z 50V
C7672	403 041 2703	ELECT 47U M 10V
C7673	403 069 9500	CERAMIC 0.01U Z 50V
C7674	403 042 8308	ELECT 22U M 16V
C7675	403 042 8308	ELECT 22U M 16V
C7676	403 042 8308	ELECT 22U M 16V
C7677	403 072 1607	CERAMIC 0.022U K 50V
C7678	403 026 2902	CERAMIC 47P J 50V
C7679	403 069 1702	CERAMIC 1000P K 50V
C7680	403 049 0800	ELECT 1U M 50V
C7681	403 068 0409	CERAMIC 0.1U Z 25V
C7682	403 093 8302	OS-SOLID 47U M 10V
C7683	403 069 9500	CERAMIC 0.01U Z 50V
C7684	403 068 0409	CERAMIC 0.1U Z 25V
C7685	403 049 0800	ELECT 1U M 50V
C7686	403 069 5601	CERAMIC 0.01U K 50V
C7687	403 069 1702	CERAMIC 1000P K 50V
C7688	403 049 0800	ELECT 1U M 50V
C7689	403 086 0108	NP-ELECT 4.7U M 25V
C7691	403 049 0800	ELECT 1U M 50V
C7692	403 042 3006	ELECT 100U M 16V
C7693	403 042 3006	ELECT 100U M 16V
C7694	403 042 3006	ELECT 100U M 16V
C7695	403 068 0409	CERAMIC 0.1U Z 25V
C7696	403 074 3104	CERAMIC 0.047U Z 50V
C7698	403 073 9107	CERAMIC 4700P K 50V
C7699	403 206 8601	CERAMIC 0.33U Z 16V

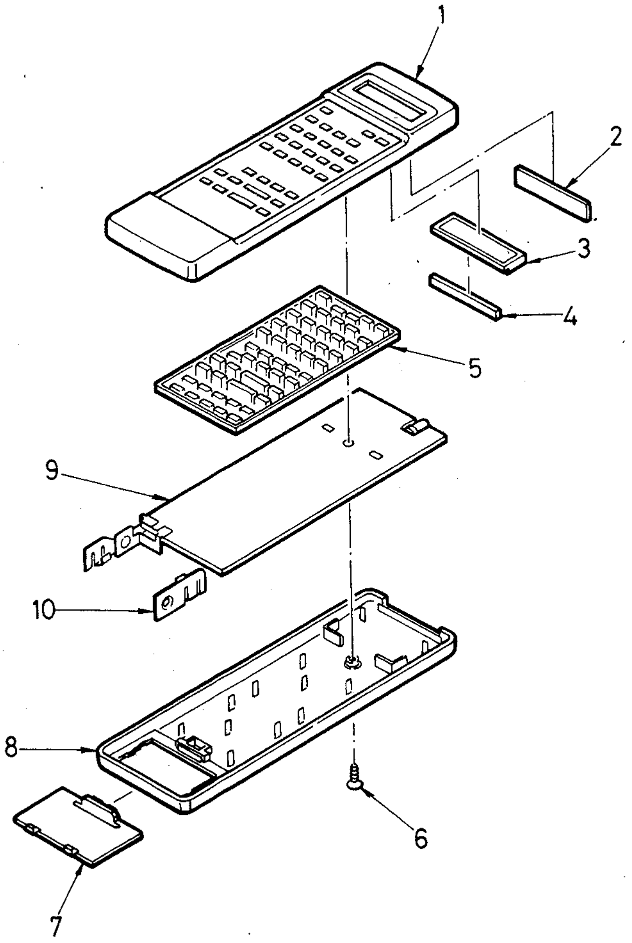
LOCATION	PARTS NO.	DESCRIPTION
CT761	613 002 6545	TRIMMER
D7602	407 120 5807	DIODE AK04-V2
D7603	407 004 0201	DIODE DCA015-TB
OR	407 003 4507	DIODE DAP202K-T-96
D7657	407 004 0201	DIODE DCA015-TB
OR	407 003 4507	DIODE DAP202K-T-96
D7659	407 004 0201	DIODE DCA015-TB
OR	407 003 4507	DIODE DAP202K-T-96
D7660	407 004 0201	DIODE DCA015-TB
OR	407 003 4507	DIODE DAP202K-T-96
IC761	409 120 6402	IC 8031AH
IC762	410 126 0707	IC TMS27PC512-20N.S15
IC763	409 194 6100	IC SRM2264LC-10
OR	409 194 6209	IC SRM2264LC-12
OR	409 225 6000	IC LH5164N-10L
OR	409 239 7406	IC LH5160N-10TL
OR	409 240 1004	IC LH5160N-10L
IC764	409 052 6907	IC TC74HC373P
OR	409 067 5506	IC LC74HC373
IC765	409 032 3704	IC MN1280-R
OR	409 243 4200	IC MN1380-R
IC766	409 184 0507	IC SDA5231
OR	409 107 8108	IC SAA5231
OR	409 265 0808	IC SDA5231-2
IC767	409 196 0304	IC SDA5243
OR	409 211 2603	IC SAA5243P/E
OR	409 262 4106	IC SDA5243-2
IC768	409 194 6100	IC SRM2264LC-10
OR	409 194 6209	IC SRM2264LC-12
OR	409 225 6000	IC LH5164N-10L
OR	409 239 7406	IC LH5160N-10TL
OR	409 240 1004	IC LH5160N-10L
IC769	409 221 4000	IC MC1378P
L7601	613 094 3279	RF CHOKE 10UH K
L7602	613 094 3279	RF CHOKE 10UH K
L7604	613 094 3279	RF CHOKE 10UH K
L7605	613 013 7807	HF CHOKE 2.2UH
L7606	613 017 0316	CORE
L7607	613 094 3279	RF CHOKE 10UH K
L7651	613 014 0876	COIL,INDUCTOR 15UHK
Q7601	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
Q7602	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
Q7651	405 002 6508	TR 2SA1179-M5-TB
OR	405 002 6706	TR 2SA1179-M6-TB
Q7653	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
Q7654	405 002 6508	TR 2SA1179-M5-TB
OR	405 002 6706	TR 2SA1179-M6-TB
Q7655	405 002 6508	TR 2SA1179-M5-TB
OR	405 002 6706	TR 2SA1179-M6-TB
Q7656	405 002 6508	TR 2SA1179-M5-TB
OR	405 002 6706	TR 2SA1179-M6-TB
Q7657	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
Q7658	405 002 6508	TR 2SA1179-M5-TB
OR	405 002 6706	TR 2SA1179-M6-TB
Q7659	405 002 6508	TR 2SA1179-M5-TB
OR	405 002 6706	TR 2SA1179-M6-TB
Q7660	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
R7601	401 037 5400	MT-GLAZE 1K JA 1/10W
R7602	401 037 5400	MT-GLAZE 1K JA 1/10W

LOCATION	PARTS NO.	DESCRIPTION
R7603	401 037 5400	MT-GLAZE 1K JA 1/10W
R7604	401 038 0602	MT-GLAZE 220 JA 1/10W
R7605	401 038 3702	MT-GLAZE 33K JA 1/10W
R7606	401 038 3702	MT-GLAZE 33K JA 1/10W
R7607	401 037 5608	MT-GLAZE 10K JA 1/10W
R7610	401 038 7809	MT-GLAZE 56K JA 1/10W
R7611	401 038 7809	MT-GLAZE 56K JA 1/10W
R7612	401 037 5806	MT-GLAZE 1M JA 1/10W
R7614	401 037 5202	MT-GLAZE 100 JA 1/10W
R7615	401 037 5608	MT-GLAZE 10K JA 1/10W
R7616	401 037 5608	MT-GLAZE 10K JA 1/10W
R7617	401 037 5608	MT-GLAZE 10K JA 1/10W
R7618	401 037 5608	MT-GLAZE 10K JA 1/10W
R7619	401 038 9506	MT-GLAZE 75 JA 1/10W
R7620	401 038 3603	MT-GLAZE 3.3K JA 1/10W
R7621	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R7623	401 038 2101	MT-GLAZE 2.7K JA 1/10W
R7624	401 037 9309	MT-GLAZE 18K JA 1/10W
R7625	401 038 6604	MT-GLAZE 470K JA 1/10W
R7626	401 037 5608	MT-GLAZE 10K JA 1/10W
R7627	401 037 5806	MT-GLAZE 1M JA 1/10W
R7629	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R7631	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R7632	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R7633	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R7634	401 038 2200	MT-GLAZE 27K JA 1/10W
R7635	401 037 8005	MT-GLAZE 15K JA 1/10W
R7636	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R7637	401 038 9001	MT-GLAZE 680 JA 1/10W
R7638	401 037 5608	MT-GLAZE 10K JA 1/10W
R7640	401 038 9506	MT-GLAZE 75 JA 1/10W
R7641	401 037 5806	MT-GLAZE 1M JA 1/10W
R7642	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R7643	401 038 5904	MT-GLAZE 4.3K JA 1/10W
R7644	401 037 5608	MT-GLAZE 10K JA 1/10W
R7645	401 037 5202	MT-GLAZE 100 JA 1/10W
R7646	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R7649	401 038 6208	MT-GLAZE 47 JA 1/10W
R7650	401 037 5608	MT-GLAZE 10K JA 1/10W
R7651	401 037 6704	MT-GLAZE 1.2K JA 1/10W
R7652	401 038 3603	MT-GLAZE 3.3K JA 1/10W
R7653	401 038 7601	MT-GLAZE 560 JA 1/10W
R7654	401 038 3504	MT-GLAZE 330 JA 1/10W
R7655	401 038 7809	MT-GLAZE 56K JA 1/10W
R7659	401 037 5400	MT-GLAZE 1K JA 1/10W
R7660	401 037 5400	MT-GLAZE 1K JA 1/10W
R7661	401 037 5608	MT-GLAZE 10K JA 1/10W
R7662	401 038 2002	MT-GLAZE 270 JA 1/10W
R7666	401 037 5202	MT-GLAZE 100 JA 1/10W
R7668	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R7669	401 038 2002	MT-GLAZE 270 JA 1/10W
R7670	401 038 2002	MT-GLAZE 270 JA 1/10W
R7671	401 038 2002	MT-GLAZE 270 JA 1/10W
R7672	401 038 9001	MT-GLAZE 680 JA 1/10W
R7673	401 037 5400	MT-GLAZE 1K JA 1/10W
R7674	401 038 4006	MT-GLAZE 360 JA 1/10W
R7675	401 038 8509	MT-GLAZE 620 JA 1/10W
R7676	401 037 9101	MT-GLAZE 180 JA 1/10W
R7677	401 038 9506	MT-GLAZE 75 JA 1/10W
R7678	401 038 9001	MT-GLAZE 680 JA 1/10W
R7679	401 037 5400	MT-GLAZE 1K JA 1/10W
R7680	401 038 4006	MT-GLAZE 360 JA 1/10W
R7681	401 038 8509	MT-GLAZE 620 JA 1/10W
R7682	401 037 9101	MT-GLAZE 180 JA 1/10W
R7683	401 038 9506	MT-GLAZE 75 JA 1/10W
R7692	401 037 5608	MT-GLAZE 10K JA 1/10W
R7693	401 038 9001	MT-GLAZE 680 JA 1/10W
R7694	401 037 5400	MT-GLAZE 1K JA 1/10W
R7695	401 038 4006	MT-GLAZE 360 JA 1/10W

LOCATION	PARTS NO.	DESCRIPTION
R7696	401 038 8509	MT-GLAZE 620 JA 1/10W
R7697	401 037 9101	MT-GLAZE 180 JA 1/10W
R7698	401 038 9506	MT-GLAZE 75 JA 1/10W
R7699	401 037 9101	MT-GLAZE 180 JA 1/10W
X7601	613 099 3083	RESONATOR,CERAMIC 12MHZ
X7651	613 098 5088	OSC,CRYSTAL 13.875MHZ
X7652	613 099 3090	RESONATOR,CERAMIC 6MHZ
X7653	613 119 1624	OSC,CRYSTAL 17.734475MHZ
X7654	613 118 1632	RESONATOR,CERAMIC 4MHZ
XF761	613 125 5654	FILTER,4.43MHZ
XF762	613 103 3924	FILTER,3MHZ
XF763	613 086 4475	FILTER
XF764	613 086 4475	FILTER
XF765	613 086 4505	FILTER
COMPL,TM-8		
COMPL.NO.	613 108 5534	
C7802	403 013 3103	CERAMIC 150P J 50V
C7803	403 067 7300	MT-COMPO 0.33U J 50V
OR	403 115 1007	MT-POLYEST 0.33U J 63V
OR	403 168 6202	MT-POLYEST 0.33U J 50V
C7804	403 057 2407	POLYESTER 0.1U J 50V
C7805	403 068 0409	CERAMIC 0.1U Z 25V
C7806	403 193 7502	ELECT 22U M 6.3V
IC781	409 148 5104	IC SDA5642
Q7801	405 015 8407	TR 2SC2812-L5-TB
OR	405 015 8704	TR 2SC2812-L6-TB
OR	405 014 4400	TR 2SC2412K-T96-Q
OR	405 014 4509	TR 2SC2412K-T96-R
R7801	401 038 6307	MT-GLAZE 470 JA 1/10W
R7802	401 037 5400	MT-GLAZE 1K JA 1/10W
R7803	401 037 5400	MT-GLAZE 1K JA 1/10W
R7804	401 037 9101	MT-GLAZE 180 JA 1/10W
R7805	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R7806	401 037 5806	MT-GLAZE 1M JA 1/10W
R7807	401 039 0601	MT-GLAZE 820K JA 1/10W
R7808	401 037 5707	MT-GLAZE 100K JA 1/10W
R7809	401 037 5608	MT-GLAZE 10K JA 1/10W
R7810	401 037 7008	MT-GLAZE 1.2M JA 1/10W
R7811	401 037 5202	MT-GLAZE 100 JA 1/10W
R7812	401 038 7700	MT-GLAZE 5.6K JA 1/10W
COMPL PCB,TB-1		
COMPL.NO.	613 125 9751	
C8502	403 071 6207	CERAMIC 220P K 50V
C8503	403 071 6207	CERAMIC 220P K 50V
C8504	403 071 6207	CERAMIC 220P K 50V
C8505	403 191 8600	ELECT 4.7U M 25V
C8506	403 069 1207	CERAMIC 1000P K 50V
C8508	403 069 1207	CERAMIC 1000P K 50V
C8509	403 191 8600	ELECT 4.7U M 25V
C8511	403 191 8808	ELECT 2.2U M 50V
C8512	403 071 6207	CERAMIC 220P K 50V
C8513	403 071 6207	CERAMIC 220P K 50V
C8522	403 071 6207	CERAMIC 220P K 50V
C8523	403 071 6207	CERAMIC 220P K 50V
C8524	403 071 6207	CERAMIC 220P K 50V
C8525	403 191 8600	ELECT 4.7U M 25V
C8526	403 069 1207	CERAMIC 1000P K 50V
C8528	403 069 1207	CERAMIC 1000P K 50V
C8529	403 191 8600	ELECT 4.7U M 25V
C8531	403 191 8808	ELECT 2.2U M 50V

LOCATION	PARTS NO.	DESCRIPTION
C8532	403 071 6207	CERAMIC 220P K 50V
C8533	403 071 6207	CERAMIC 220P K 50V
C8541	403 193 7601	ELECT 220U M 6.3V
C8551	403 189 2405	ELECT 10U M 16V
C8553	403 139 1502	ELECT 10U M 16V
C8554	403 163 7907	ELECT 47U M 6.3V
C8555	403 001 1609	CERAMIC 0.01U K 16V
CN853	613 105 6633	SOCKET,21P
CN854	613 105 6640	SOCKET,21P
D8501	407 070 7104	ZENER DIODE GZS5.6X-BT
OR	407 053 6704	ZENER DIODE MTZ5.6B-T-77
D8502	407 070 7104	ZENER DIODE GZS5.6X-BT
OR	407 053 6704	ZENER DIODE MTZ5.6B-T-77
D8503	407 070 7104	ZENER DIODE GZS5.6X-BT
OR	407 053 6704	ZENER DIODE MTZ5.6B-T-77
D8504	407 070 7104	ZENER DIODE GZS5.6X-BT
OR	407 053 6704	ZENER DIODE MTZ5.6B-T-77
D8505	407 070 7104	ZENER DIODE GZS5.6X-BT
OR	407 053 6704	ZENER DIODE MTZ5.6B-T-77
D8507	407 070 7104	ZENER DIODE GZS5.6X-BT
OR	407 053 6704	ZENER DIODE MTZ5.6B-T-77
IC851	409 051 2801	IC TC4052BP
IC852	409 120 3401	IC LA7221
OR	409 003 4501	IC BA7021
JK851	613 009 1529	SOCKET
JK852	613 085 8092	SOCKET
JK853	613 009 1529	SOCKET
JK854	613 085 8092	SOCKET
Q8503	405 018 2501	TR 2SC3399-AC
OR	405 000 6104	TR DTC144ES-DCTP
R8501	401 012 5609	CARBON 1K JA 1/4W
R8502	401 012 5609	CARBON 1K JA 1/4W
R8503	401 022 1806	CARBON 680 JA 1/4W
R8504	401 022 1806	CARBON 680 JA 1/4W
R8505	401 016 5704	CARBON 220K JA 1/4W
R8508	401 012 5609	CARBON 1K JA 1/4W
R8521	401 012 5609	CARBON 1K JA 1/4W
R8522	401 012 5609	CARBON 1K JA 1/4W
R8523	401 022 1806	CARBON 680 JA 1/4W
R8524	401 022 1806	CARBON 680 JA 1/4W
R8525	401 016 5704	CARBON 220K JA 1/4W
R8528	401 012 5609	CARBON 1K JA 1/4W
R8541	401 020 1907	CARBON 4.7K JA 1/4W
R8542	401 020 1907	CARBON 4.7K JA 1/4W
R8543	401 016 4707	CARBON 22K JA 1/4W
R8544	401 016 4707	CARBON 22K JA 1/4W
R8547	401 012 5609	CARBON 1K JA 1/4W
R8551	401 022 6702	CARBON 75 JA 1/4W
R8553	401 022 6702	CARBON 75 JA 1/4W
R8554	401 012 5609	CARBON 1K JA 1/4W
RB851	613 085 3110	R-NETWORK,100KX5
RB852	613 085 3110	R-NETWORK,100KX5

LOCATION	PARTS NO.	DESCRIPTION
REMOCON		
COMPL.NO.	613 126 0436	
1	613 126 1617	ASSY,CABINET,TOP
2	613 122 5305	WINDOW
3	613 123 1979	LCD
4	613 123 1931	CONNECTOR
5	613 126 1723	BUTTON
6	411 101 7308	SCR S-TPG FLT 2.6X10
7	613 122 5220	LID,BATTERY
8	613 122 5213	CABINET,BOTTOM
9	613 122 4940	COMPL PCB,RM-1
10	613 123 1962	TERMINAL,BATTERY



LOCATION	PARTS NO.	DESCRIPTION
COMPL PCB,RM-1		
COMPL.NO.	613 122 4940	
	613 123 1948	TERMINAL,BATTERY,+
	613 123 1955	TERMINAL,BATTERY,-
	613 123 1900	SPACER
C1	403 068 0409	CERAMIC 0.1U Z 25V
C2	403 152 9707	ELECT 22U M 6.3V
C3	403 009 9300	CERAMIC 100P K 50V
C4	403 009 9300	CERAMIC 100P K 50V
C5	403 068 0409	CERAMIC 0.1U Z 25V
C6	403 068 0409	CERAMIC 0.1U Z 25V
C7	403 153 0802	ELECT 220U M 4V
IC1	409 245 3003	IC LC5872-S-1275
OR	409 246 8205	IC LC5872-S-1300
J1	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
LED1	407 040 3709	LED SLR-932A
Q1	405 021 2406	TR 2SD1048-X7-TB
OR	405 021 2505	TR 2SD1048-X8-TB
R1	401 035 4603	MT-GLAZE 100 JA 1/8W
R2	401 169 5200	MT-GLAZE 2.2 JA 1/4W
R3	401 035 4603	MT-GLAZE 100 JA 1/8W
R4	401 037 5806	MT-GLAZE 1M JA 1/10W
R5	401 039 0601	MT-GLAZE 820K JA 1/10W
X1	613 123 2020	RESONATOR,CERAMIC1.216MHZ

NOKIA 3782 HIFI VPS

BLOCK DIAGRAMS, CIRCUIT DIAGRAMS & PRINTED CIRCUIT BOARDS

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NOTES:

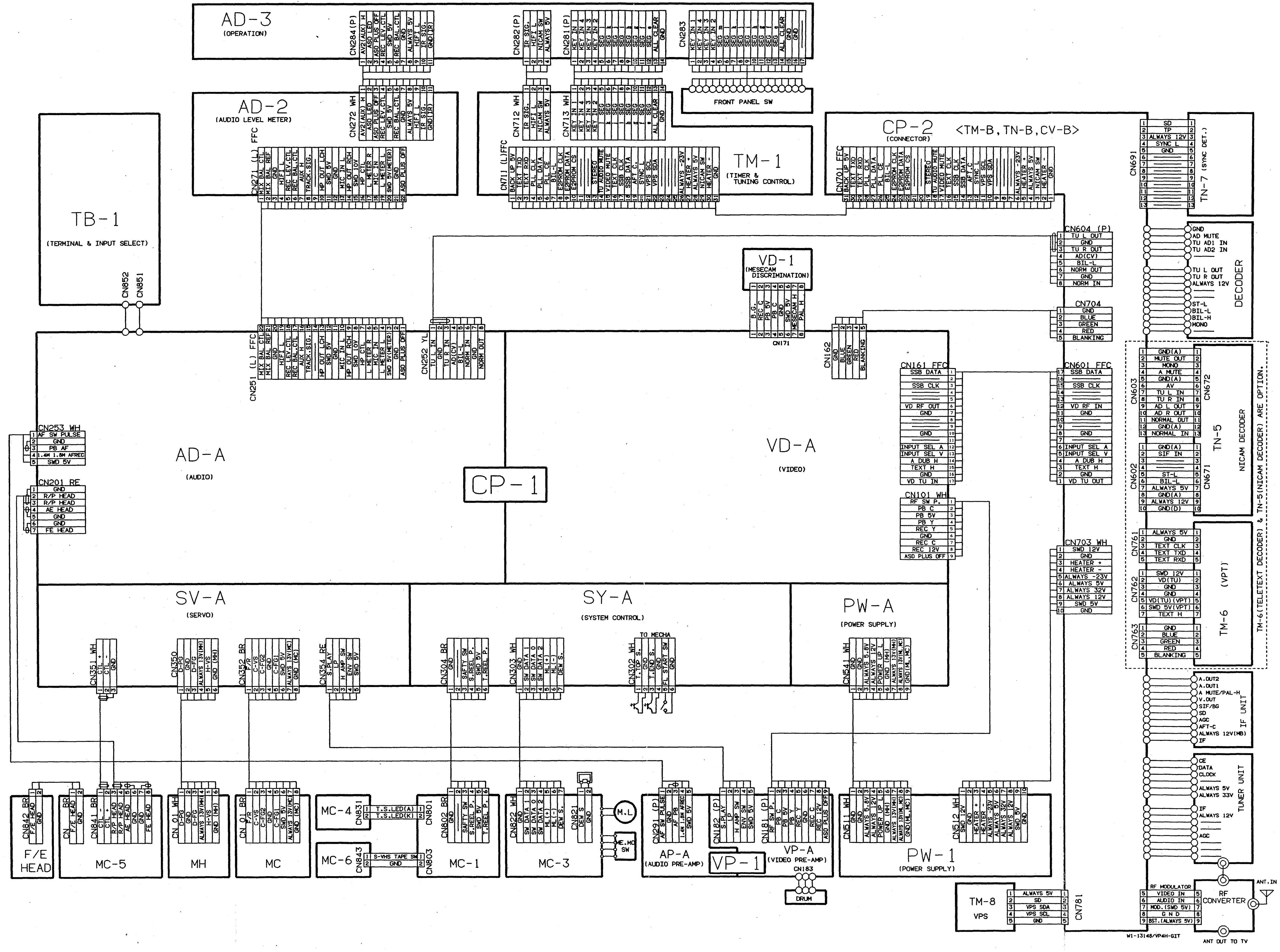
1. All resistance values in "OHMS" unless otherwise noted. (K = 1,000 M = 1,000,000)
2. All capacitance values in "μfd" unless otherwise noted.
   p = pico farad
3. All inductance values in "mH" unless otherwise noted. μ = micro henry.

PRODUCT SAFETY NOTICE

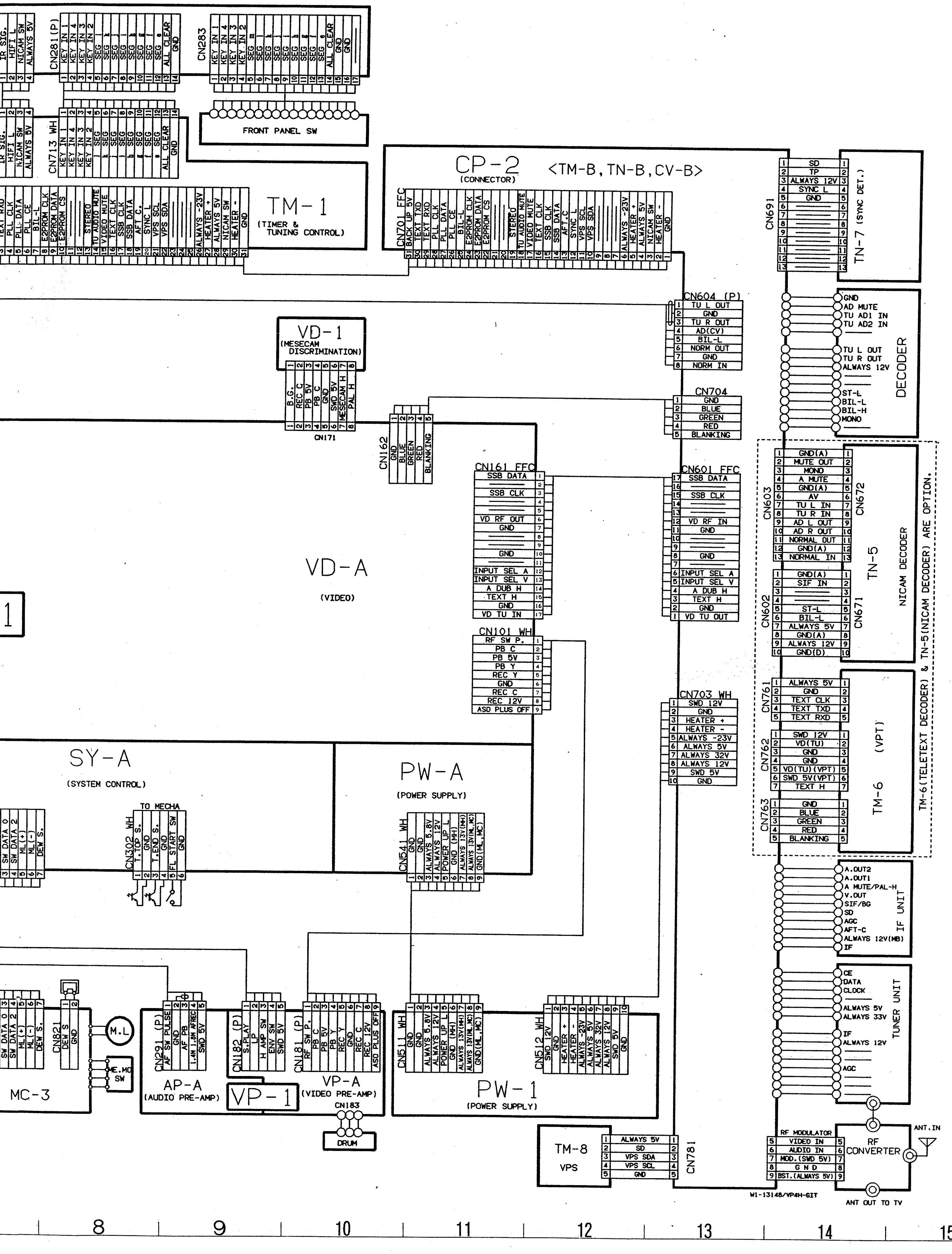
THE COMPONENTS DESIGNATED BY A SYMBOL (⚠) IN THIS SCHEMATIC DIAGRAM DESIGNATES COMPONENTS WHOSE VALUE ARE OF SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. SHOULD ANY COMPONENT DESIGNATED BY A SYMBOL NEED TO BE REPLACED, USE ONLY THE PART DESIGNATED IN THE PARTS LIST. DO NOT DEVIATE FROM THE RESISTNACE, WATTAGE AND VOLTAGE RATINGS SHOWN.

1. BLOCK DIAGRAM

1-1. OVERALL WIRING DIAGRAM


AD-3 (OPERATION)
CN284 (P)
CN282 (P)
CN281 (P)
CN283
FRONT PANEL SW
AD-2 (AUDIO LEVEL METER)
CN272 WH
CN271 (L) FFC
TM-1 (TIMER & TUNING CONTROL)
CN712 WH
CN713 WH
CN711 (L) FFC
CP-2 (CONNECTOR) <TM-B, TN-B, CV-B>
CN701 FFC
TN-7 (SYNC DET.)
CN691
DECODER
TB-1 (TERMINAL & INPUT SELECT)
CN852
CN851
VD-1 (MESECAM DISCRIMINATION)
CN171
CN604 (P)
CN704
CN162
CN251 (L) FFC
CN252 YL
CN161 FFC
CN601 FFC
CN603
CN672
TN-5 NICAM DECODER
CN602
CN671
CN253 WH
CN201 RE
AD-A (AUDIO)
CP-1
VD-A (VIDEO)
CN101 WH
CN703 WH
CN761
CN762
CN763
TM-6 (VPT)
TM-6 (TELETEXT DECODER) & TN-5 (NICAM DECODER) ARE OPTION.
SV-A (SERVO)
SY-A (SYSTEM CONTROL)
PW-A (POWER SUPPLY)
CN351 WH
CN350
CN352 BR
CN354 RE
CN304 BR
CN303 WH
TO MECHA
CN302 WH
CN541 WH
IF UNIT
TUNER UNIT
CN842 BR
F/E HEAD
CN841 BR
MC-5
CN 01 WH
MH
CN 01 BR
MC
MC-4
CN831
MC-6
CN843
CN801
CN803
CN802 BR
MC-1
CN822 WH
CN821
MC-3
M.L
ME.MO SW
CN291 (P)
AP-A (AUDIO PRE-AMP)
CN182 (P)
VP-1
CN181 (P)
VP-A (VIDEO PRE-AMP)
CN183
DRUM
CN511 WH
CN512 WH
PW-1 (POWER SUPPLY)
TM-8 VPS
CN781
RF MODULATOR
RF CONVERTER
ANT. IN
ANT OUT TO TV
W1-13148/VP4H-GIT

OVERALL WIRING DIAGRAM


CN281 (P)
CN283
FRONT PANEL SW
CN713 WH
TM-1
(TIMER & TUNING CONTROL)
CP-2
(CONNECTOR)
<TM-B, TN-B, CV-B>
CN701 FFC
CN691
TN-7 (SYNC DET.)
SD
TP
ALWAYS 12V
SYNC L
GND
DECODER
CN604 (P)
TU L OUT
TU R OUT
AD(CV)
BIL-L
NORM OUT
NORM IN
VD-1
(MESECAM DISCRIMINATION)
CN171
CN704
GND
BLUE
GREEN
RED
BLANKING
CN162
VD-A
(VIDEO)
CN161 FFC
SSB DATA
SSB CLK
VD RF OUT
INPUT SEL A
INPUT SEL V
A DUB H
TEXT H
VD TU IN
CN601 FFC
VD RF IN
VD TU OUT
CN101 WH
RF SW P.
PB C
PB 5V
PB Y
REC Y
REC C
REC 12V
ASD PLUS OFF
CN603
CN672
TN-5
NICAM DECODER
CN602
CN671
CN703 WH
SWD 12V
HEATER +
HEATER -
ALWAYS -23V
ALWAYS 5V
ALWAYS 32V
ALWAYS 12V
SWD 5V
CN761
ALWAYS 5V
TEXT CLK
TEXT TXD
TEXT RXD
CN762
TM-6 (VPT)
CN763
TM-6 (TELETEXT DECODER) & TN-5 (NICAM DECODER) ARE OPTION.
SY-A
(SYSTEM CONTROL)
TO MECHA
CN302 WH
T.TOP S.
T.END S.
FL START SW
PW-A
(POWER SUPPLY)
CN541 WH
A.OUT2
A.OUT1
A MUTE/PAL-H
V.OUT
SIF/BG
SD
AGC
AFT-C
ALWAYS 12V(MB)
IF
IF UNIT
CE
DATA
CLOCK
ALWAYS 5V
ALWAYS 33V
ALWAYS 12V
TUNER UNIT
MC-3
CN821
M.L
MODE SW
AP-A
(AUDIO PRE-AMP)
CN291 (P)
VP-1
CN182 (P)
CN181 (P)
VP-A
(VIDEO PRE-AMP)
CN183
DRUM
CN511 WH
PW-1
(POWER SUPPLY)
CN512 WH
TM-8
VPS
ALWAYS 5V
VPS SDA
VPS SCL
CN781
RF MODULATOR
VIDEO IN
AUDIO IN
MOD. (SWD 5V)
BST. (ALWAYS 5V)
RF CONVERTER
ANT.IN
ANT OUT TO TV
WI-13148/VP4H-GIT
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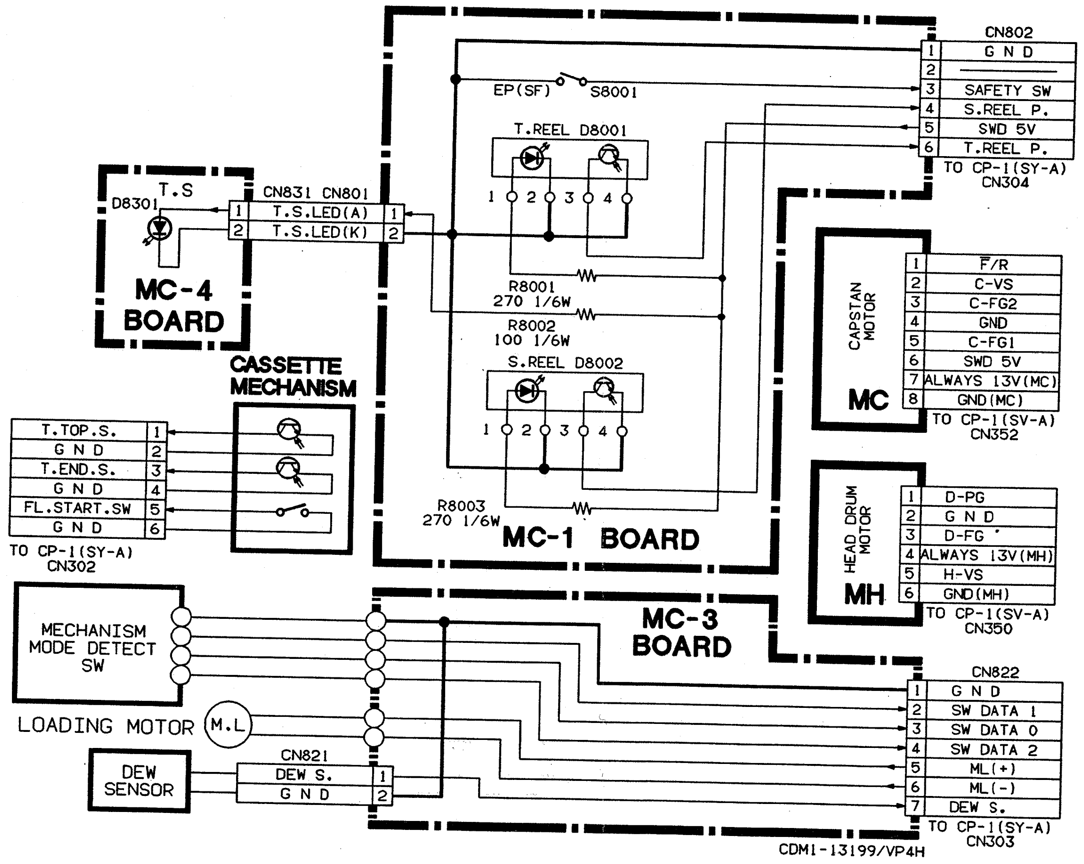
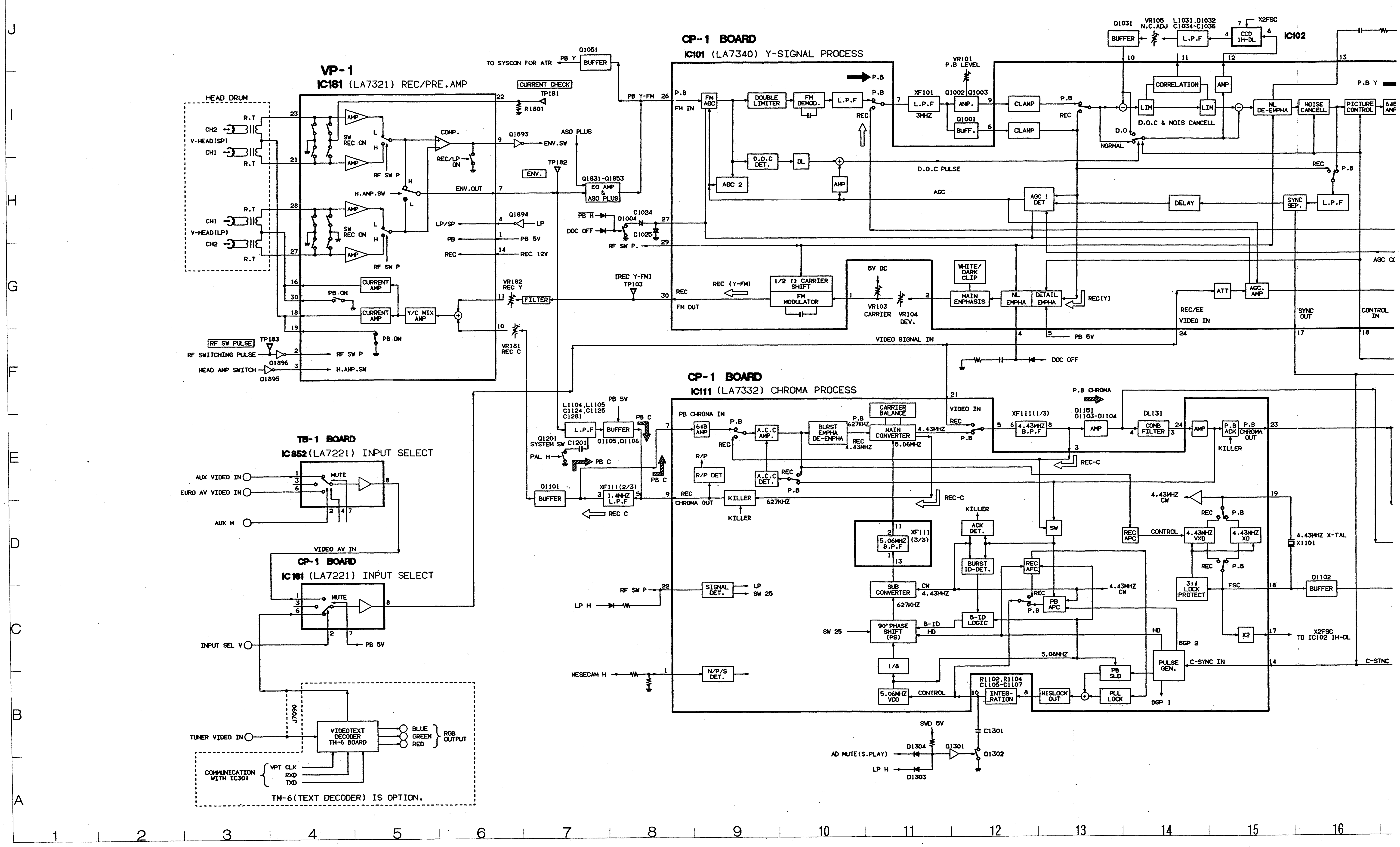
1-2. MECHANISM CONNECTION CIRCUIT DIAGRAM


CN802
G N D
SAFETY SW
S.REEL P.
SWD 5V
T.REEL P.
TO CP-1 (SY-A) CN304
EP(SF)
S8001
T.REEL D8001
T.S
D8301
CN831 CN801
T.S.LED(A)
T.S.LED(K)
MC-4 BOARD
R8001
270 1/6W
R8002
100 1/6W
S.REEL D8002
CASSETTE MECHANISM
T.TOP.S.
G N D
T.END.S.
FL.START.SW
TO CP-1 (SY-A) CN302
R8003
270 1/6W
MC-1 BOARD
CAPSTAN MOTOR
MC
F/R
C-VS
C-FG2
GND
C-FG1
SWD 5V
ALWAYS 13V(MC)
GND(MC)
TO CP-1 (SV-A) CN352
HEAD DRUM MOTOR
MH
D-PG
D-FG
ALWAYS 13V(MH)
H-VS
GND(MH)
TO CP-1 (SV-A) CN350
MECHANISM MODE DETECT SW
MC-3 BOARD
LOADING MOTOR
M.L
CN822
SW DATA 1
SW DATA 0
SW DATA 2
ML(+)
ML(-)
DEW S.
TO CP-1 (SY-A) CN303
DEW SENSOR
CN821
CDM1-13199/VP4H

1-3. VIDEO CIRCUIT BASIC BLOCK DIAGRAM


VP-1
IC181 (LA7321) REC/PRE.AMP
HEAD DRUM
V-HEAD(SP)
V-HEAD(LP)
CH1
CH2
R.T
AMP
COMP.
SW REC:ON
RF SW P
H.AMP.SW
REC/LP ON
CURRENT AMP
Y/C MIX AMP
PB:ON
ENV.OUT
ENV.SW
ASO PLUS
CURRENT CHECK
TP181
R1801
TP182
TP183
Q1893
Q1894
Q1895
Q1896
RF SW PULSE
RF SWITCHING PULSE
HEAD AMP SWITCH
LP/SP
PB
REC
PB 5V
REC 12V
VR182 REC Y
VR181 REC C
FILTER
TO SYSCON FOR ATR
Q1051
BUFFER
PB Y
PB Y-FM
ENV.
Q1831-Q1853
EQ AMP & ASO PLUS
Q1004
C1024
C1025
DOC OFF
RF SW P.
[REC Y-FM] TP103
CP-1 BOARD
IC101 (LA7340) Y-SIGNAL PROCESS
FM IN
FM AGC
DOUBLE LIMITER
FM DEMOD.
L.P.F
D.O.C DET.
DL
AGC 2
AMP
XF101 3MHZ
VR101 P.B LEVEL
Q1002 Q1003
Q1001
BUFF.
CLAMP
D.O.C PULSE
AGC
AGC 1 DET
DELAY
SYNC SEP.
REC (Y-FM)
FM OUT
1/2 (!) CARRIER SHIFT
FM MODULATOR
5V DC
VR103 CARRIER
VR104 DEV.
WHITE/ DARK CLIP
MAIN EMPHASIS
NL EMPHA
DETAIL EMPHA
REC(Y)
VIDEO SIGNAL IN
DOC OFF
Q1031
VR105 N.C.ADJ
L1031,Q1032 C1034-C1036
CCD 1H-DL
IC102
X2FSC
CORRELATION
LIM
D.O.C & NOIS CANCELL
NORMAL
NL DE-EMPHA
NOISE CANCELL
PICTURE CONTROL
P.B Y
ATT
AGC. AMP
AGC CO
REC/EE VIDEO IN
SYNC OUT
CONTROL IN
TB-1 BOARD
IC852 (LA7221) INPUT SELECT
AUX VIDEO IN
EURO AV VIDEO IN
AUX H
MUTE
VIDEO AV IN
CP-1 BOARD
IC161 (LA7221) INPUT SELECT
INPUT SEL V
PB 5V
TUNER VIDEO IN
J7090
VIDEOTEXT DECODER TM-6 BOARD
BLUE
GREEN
RED
RGB OUTPUT
COMMUNICATION WITH IC301
VPT CLK
RXD
TXD
TM-6(TEXT DECODER) IS OPTION.
L1104,L1105 C1124,C1125 C1281
Q1105,Q1106
Q1201 SYSTEM SW
C1201
PAL H
PB C
Q1101
XF111(2/3) 1.4MHZ L.P.F
REC C
CP-1 BOARD
IC111 (LA7332) CHROMA PROCESS
PB CHROMA IN
6dB AMP
A.C.C AMP.
A.C.C DET.
R/P DET
BURST EMPHA DE-EMPHA
CARRIER BALANCE
MAIN CONVERTER
627KHZ
4.43MHZ
5.06MHZ
KILLER
CHROMA OUT
REC-C
VIDEO IN
XF111(1/3) 4.43MHZ B.P.F
Q1151 Q1103-Q1104
DL131
COMB FILTER
P.B CHROMA
P.B ACK
CHROMA OUT
ACK DET.
SW
XF111 (3/3) 5.06MHZ B.P.F
BURST ID-DET.
REC AFC
REC APC
CONTROL
4.43MHZ VXO
4.43MHZ XO
4.43MHZ CW
4.43MHZ X-TAL X1101
3rd LOCK PROTECT
FSC
Q1102
X2FSC TO IC102 1H-DL
C-SYNC
RF SW P
SIGNAL DET.
LP SW 25
LP H
SUB CONVERTER
CW
SW 25
90° PHASE SHIFT (PS)
B-ID
HD
B-ID LOGIC
PB APC
PB SLD
PLL LOCK
MISLOCK OUT
PULSE GEN.
C-SYNC IN
BGP 1
BGP 2
1/8
5.06MHZ VCO
R1102,R1104 C1105-C1107
INTEG- RATION
MESECAM H
N/P/S DET.
SWD 5V
C1301
D1304
Q1301
Q1302
D1303
AD MUTE(S.PLAY)
K
J
I
H
G
F
E
D
C
B
A
1
2
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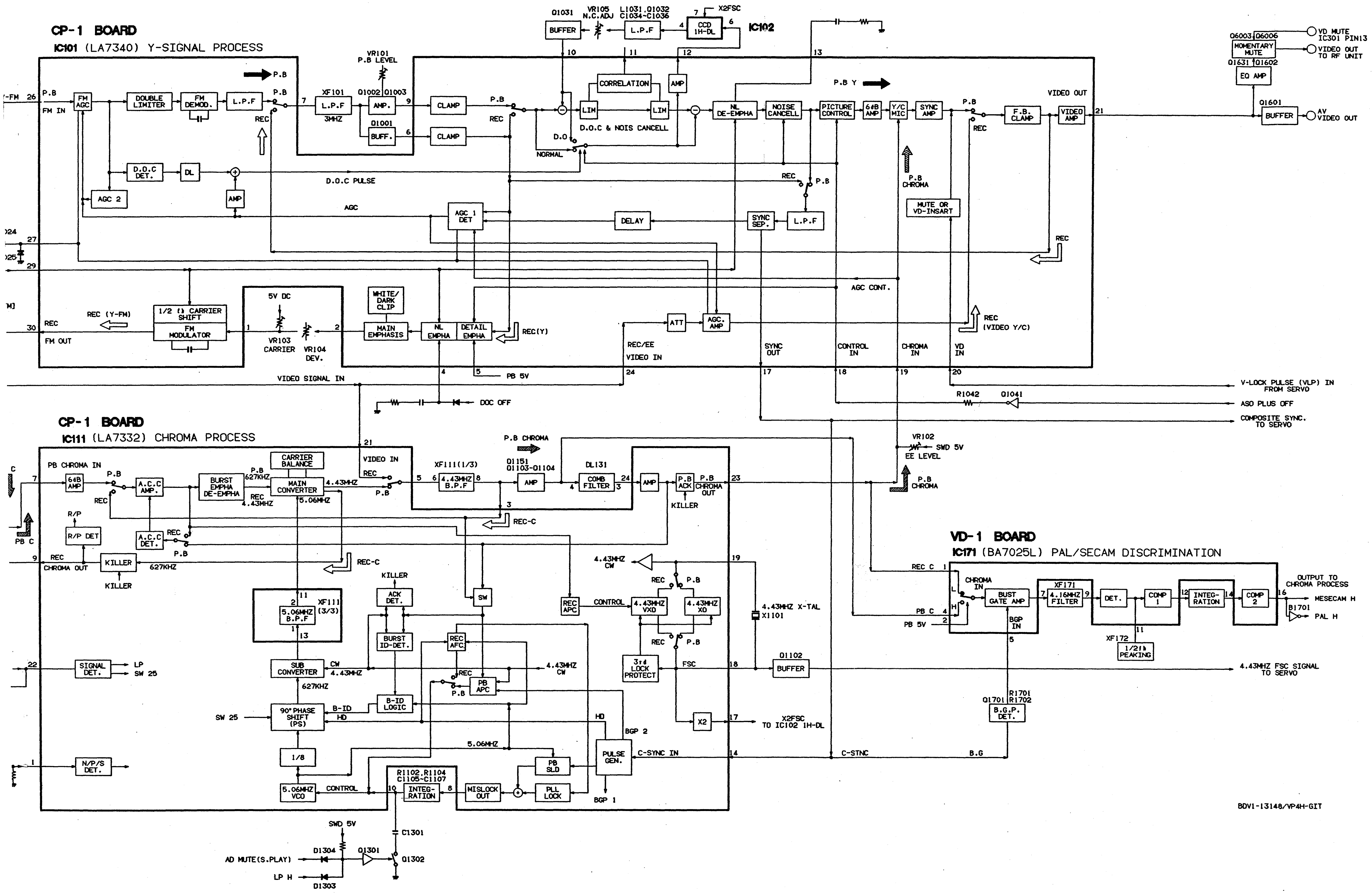
1-3. VIDEO CIRCUIT BASIC BLOCK DIAGRAM



CP-1 BOARD
IC101 (LA7340) Y-SIGNAL PROCESS
FM AGC
DOUBLE LIMITER
FM DEMOD.
L.P.F
P.B
REC
FM IN
D.O.C DET.
DL
AGC 2
AMP
D.O.C PULSE
AGC
XF101
L.P.F
3MHZ
VR101 P.B LEVEL
Q1002 Q1003
AMP.
Q1001
BUFF.
CLAMP
Q1031
BUFFER
VR105 N.C.ADJ
L1031,Q1032 C1034-C1036
L.P.F
X2FSC
CCD 1H-DL
IC102
CORRELATION
AMP
LIM
D.O.C & NOIS CANCELL
D.O
NORMAL
P.B Y
NL DE-EMPHA
NOISE CANCELL
PICTURE CONTROL
6dB AMP
Y/C MIC
SYNC AMP
F.B. CLAMP
VIDEO AMP
VIDEO OUT
P.B CHROMA
MUTE OR VD-INSART
AGC 1 DET
DELAY
SYNC SEP.
L.P.F
AGC CONT.
1/2 CARRIER SHIFT
FM MODULATOR
REC (Y-FM)
FM OUT
5V DC
VR103 CARRIER
VR104 DEV.
WHITE/DARK CLIP
MAIN EMPHASIS
NL EMPHA
DETAIL EMPHA
REC(Y)
ATT
AGC. AMP
REC (VIDEO Y/C)
REC/EE VIDEO IN
SYNC OUT
CONTROL IN
CHROMA IN
VD IN
PB 5V
VIDEO SIGNAL IN
DOC OFF
Q6003 Q6006
MOMENTARY MUTE
Q1631 Q1602
EQ AMP
Q1601
BUFFER
VD MUTE IC301 PIN13
VIDEO OUT TO RF UNIT
AV VIDEO OUT
V-LOCK PULSE (VLP) IN FROM SERVO
R1042 Q1041
ASO PLUS OFF
COMPOSITE SYNC. TO SERVO
VR102
SWD 5V
EE LEVEL
CP-1 BOARD
IC111 (LA7332) CHROMA PROCESS
PB CHROMA IN
6dB AMP
A.C.C AMP.
BURST EMPHA DE-EMPHA
CARRIER BALANCE
MAIN CONVERTER
627KHZ
4.43MHZ
5.06MHZ
R/P DET
A.C.C DET.
KILLER
CHROMA OUT
PB C
VIDEO IN
XF111(1/3)
4.43MHZ B.P.F
Q1151 Q1103-Q1104
AMP
DL131
COMB FILTER
P.B ACK
P.B CHROMA OUT
KILLER
REC-C
XF111 (3/3)
5.06MHZ B.P.F
ACK DET.
SW
BURST ID-DET.
REC AFC
REC APC
CONTROL
4.43MHZ VXO
4.43MHZ XO
4.43MHZ CW
4.43MHZ X-TAL X1101
3:4 LOCK PROTECT
FSC
Q1102
BUFFER
4.43MHZ FSC SIGNAL TO SERVO
SIGNAL DET.
LP
SW 25
SUB CONVERTER
CW
PB APC
B-ID LOGIC
90° PHASE SHIFT (PS)
B-ID
HD
1/8
5.06MHZ VCO
R1102,R1104 C1105-C1107
INTEG-RATION
MISLOCK OUT
PB SLD
PLL LOCK
PULSE GEN.
BGP 2
BGP 1
C-SYNC IN
X2
X2FSC TO IC102 1H-DL
N/P/S DET.
SWD 5V
D1304
Q1301
C1301
Q1302
AD MUTE(S.PLAY)
LP H
D1303
VD-1 BOARD
IC171 (BA7025L) PAL/SECAM DISCRIMINATION
REC C
CHROMA IN
BUST GATE AMP
XF171
4.16MHZ FILTER
DET.
COMP 1
INTEG-RATION
COMP 2
OUTPUT TO CHROMA PROCESS
MESECAM H
PAL H
Q1701
BGP IN
XF172
1/2fh PEAKING
Q1701 R1701 R1702
B.G.P. DET.
C-SYNC
B.G
8DV1-13148/VP4H-GIT
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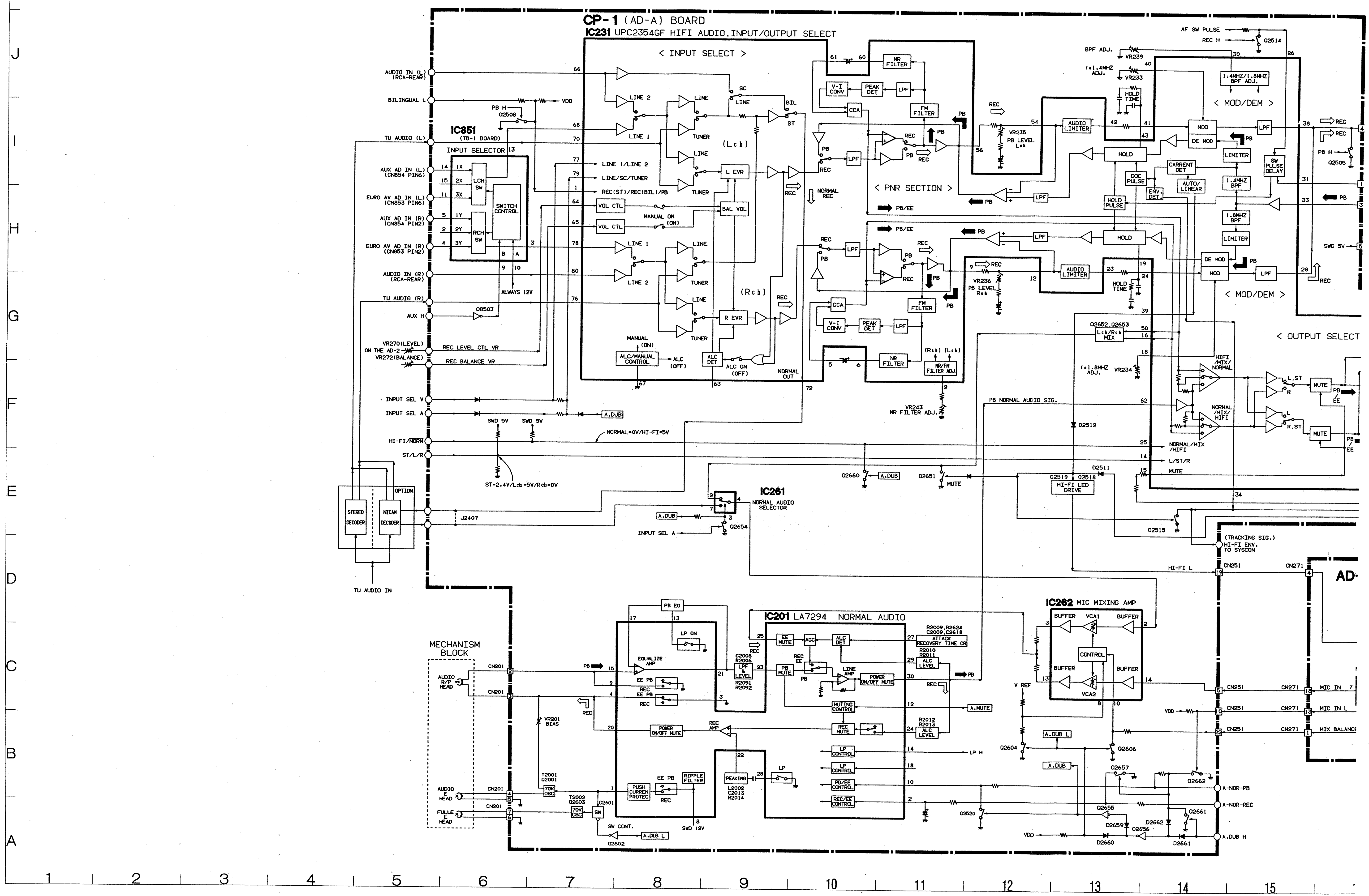
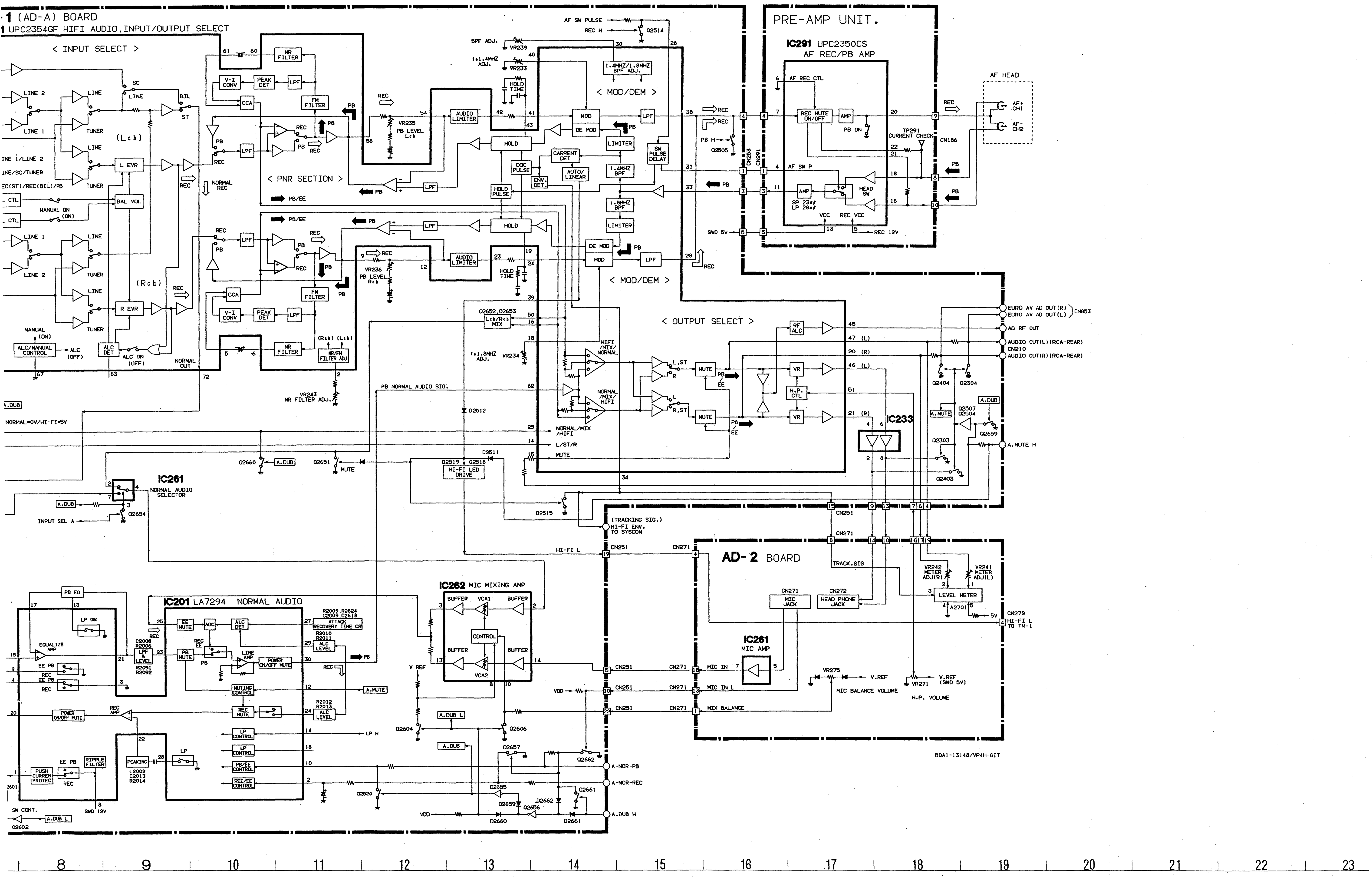
1-4. AUDIO CIRCUIT BASIC BLOCK DIAGRAM


CP-1 (AD-A) BOARD
IC231 UPC2354GF HIFI AUDIO, INPUT/OUTPUT SELECT
< INPUT SELECT >
< PNR SECTION >
< MOD/DEM >
< OUTPUT SELECT
IC851 (TB-1 BOARD) INPUT SELECTOR
SWITCH CONTROL
LCH SW
RCH SW
ALWAYS 12V
AUDIO IN (L) (RCA-REAR)
BILINGUAL L
TU AUDIO (L)
AUX AD IN (L) (CN854 PIN6)
EURO AV AD IN (L) (CN853 PIN6)
AUX AD IN (R) (CN854 PIN2)
EURO AV AD IN (R) (CN853 PIN2)
AUDIO IN (R) (RCA-REAR)
TU AUDIO (R)
AUX H
VR270(LEVEL) ON THE AD-2
VR272(BALANCE)
REC LEVEL CTL VR
REC BALANCE VR
INPUT SEL V
INPUT SEL A
HI-FI/NORM
ST/L/R
NORMAL=0V/HI-FI=5V
ST=2.4V/Lch=5V/Rch=0V
SWD 5V
STEREO DECODER
NICAM DECODER
OPTION
J2407
TU AUDIO IN
LINE 1
LINE 2
TUNER
LINE 1/LINE 2
LINE/SC/TUNER
REC(ST)/REC(BIL)/PB
VOL CTL
BAL VOL
MANUAL ON (ON)
L EVR
R EVR
(Lch)
(Rch)
ALC/MANUAL CONTROL
ALC DET
ALC ON (OFF)
NORMAL OUT
V-I CONV
PEAK DET
CCA
NR FILTER
FM FILTER
LPF
REC
PB
PB/EE
NORMAL REC
VR235 PB LEVEL Lch
VR236 PB LEVEL Rch
AUDIO LIMITER
HOLD
HOLD TIME
HOLD PULSE
DOC PULSE
ENV. DET
CARRENT DET
AUTO/LINEAR
MOD
DE MOD
LIMITER
1.4MHZ BPF
1.8MHZ BPF
1.4MHZ/1.8MHZ BPF ADJ.
SW PULSE DELAY
BPF ADJ.
VR239
f0 1.4MHZ ADJ.
VR233
f0 1.8MHZ ADJ.
VR234
AF SW PULSE
REC H
Q2514
PB H
Q2505
SWD 5V
NR/FM FILTER ADJ
VR243 NR FILTER ADJ.
Q2652,Q2653 Lch/Rch MIX
HIFI /MIX/ NORMAL
NORMAL /MIX/ HIFI
L,ST
R,ST
MUTE
NORMAL/MIX /HIFI
L/ST/R
PB NORMAL AUDIO SIG.
D2512
D2511
Q2519 Q2518 HI-FI LED DRIVE
Q2660
Q2651
A.DUB
IC261 NORMAL AUDIO SELECTOR
Q2654
INPUT SEL A
Q2515
(TRACKING SIG.) HI-FI ENV. TO SYSCON
HI-FI L
CN251
CN271
AD-
IC262 MIC MIXING AMP
BUFFER
VCA1
VCA2
CONTROL
V REF
MIC IN
MIC IN L
MIX BALANCE
VDD
Q2604
Q2606
A.DUB L
Q2657
Q2662
Q2661
Q2655
Q2656
Q2659
D2659
D2660
D2661
D2662
Q2520
A-NOR-PB
A-NOR-REC
A.DUB H
IC201 LA7294 NORMAL AUDIO
PB EQ
LP ON
EQUALIZE AMP
EE PB
REC AMP
POWER ON/OFF MUTE
PUSH CURREN PROTEC
RIPPLE FILTER
PEAKING
LP
EE MUTE
AGC
ALC DET
PB MUTE
LINE AMP
MUTING CONTROL
REC MUTE
LP CONTROL
PB/EE CONTROL
REC/EE CONTROL
C2008 R2006 LPF & LEVEL R2091 R2092
R2009,R2624 C2009,C2618 ATTACK RECOVERY TIME CR
R2010 R2011 ALC LEVEL
R2012 R2013 ALC LEVEL
L2002 C2013 R2014
A.MUTE
LP H
MECHANISM BLOCK
AUDIO R/P HEAD
AUDIO E HEAD
FULL E HEAD
CN201
VR201 BIAS
T2001 Q2001
T2002 Q2603
70K OSC
Q2601
SW
SW CONT.
Q2602
A.DUB L
SWD 12V
Q2508
Q8503
VDD
A B C D E F G H I J K
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

1-4. AUDIO CIRCUIT BASIC BLOCK DIAGRAM



1 (AD-A) BOARD
1 UPC2354GF HIFI AUDIO, INPUT/OUTPUT SELECT
< INPUT SELECT >
LINE 2
LINE 1
TUNER
(Lch)
(Rch)
L EVR
R EVR
BAL VOL
ALC/MANUAL CONTROL
ALC DET
MANUAL (ON)
ALC (OFF)
ALC ON (OFF)
NORMAL OUT
NR FILTER
V-I CONV
PEAK DET
LPF
CCA
FM FILTER
< PNR SECTION >
PB/EE
AUDIO LIMITER
VR235 PB LEVEL Lch
VR236 PB LEVEL Rch
HOLD
HOLD TIME
HOLD PULSE
DOC PULSE
ENV. DET.
CARRENT DET
AUTO/ LINEAR
MOD
DE MOD
LIMITER
1.4MHZ BPF
1.8MHZ BPF
1.4MHZ/1.8MHZ BPF ADJ.
< MOD/DEM >
SW PULSE DELAY
AF SW PULSE
REC H
BPF ADJ.
VR239
VR233
NR/FM FILTER ADJ
VR243 NR FILTER ADJ.
fo1.8MHZ ADJ. VR234
Q2652,Q2653 Lch/Rch MIX
< OUTPUT SELECT >
HIFI /MIX/ NORMAL
NORMAL /MIX/ HIFI
MUTE
RF ALC
VR
H.P. CTL
IC233
PB NORMAL AUDIO SIG.
NORMAL/MIX /HIFI
L/ST/R
Q2519 Q2518 HI-FI LED DRIVE
NORMAL=0V/HI-FI=5V
IC261 NORMAL AUDIO SELECTOR
INPUT SEL A
A.DUB
PRE-AMP UNIT.
IC291 UPC2350CS AF REC/PB AMP
AF REC CTL
REC MUTE ON/OFF
AMP
PB ON
TP291 CURRENT CHECK
AF SW P
HEAD SW
SP 23 LP 28
VCC REC VCC
REC 12V
SWD 5V
CN253
CN291
CN186
AF HEAD
AF+ CH1
AF- CH2
EURO AV AD OUT(R)
EURO AV AD OUT(L)
CN853
AD RF OUT
AUDIO OUT(L)(RCA-REAR)
CN210
AUDIO OUT(R)(RCA-REAR)
Q2404 Q2304
A.MUTE
Q2507 Q2504
Q2659
Q2303
A.MUTE H
Q2403
CN251
CN271
(TRACKING SIG.) HI-FI ENV. TO SYSCON
HI-FI L
AD-2 BOARD
TRACK.SIG
VR242 METER ADJ(R)
VR241 METER ADJ(L)
LEVEL METER
A2701
5V
CN272 HI-FI L TO TM-I
MIC JACK
HEAD PHONE JACK
IC261 MIC AMP
MIC IN
MIC IN L
MIX BALANCE
VR275
V.REF
MIC BALANCE VOLUME
VR271
V.REF (SWD 5V)
H.P. VOLUME
IC262 MIC MIXING AMP
BUFFER
VCA1
VCA2
CONTROL
IC201 LA7294 NORMAL AUDIO
PB EQ
LP ON
EQUALIZE AMP
EE PB
REC EE PB
POWER ON/OFF MUTE
REC AMP
PUSH CURREN PROTEC
RIPPLE FILTER
EE MUTE
AGC
ALC DET
LPF & LEVEL
PB MUTE
LINE AMP
POWER ON/OFF MUTE
MUTING CONTROL
REC MUTE
LP CONTROL
PB/EE CONTROL
REC/EE CONTROL
PEAKING
ATTACK RECOVERY TIME CR
ALC LEVEL
R2009,R2624 C2009,C2618
R2010 R2011
R2012 R2013
L2002 C2013 R2014
C2008 R2006
R2091 R2092
LP H
SW CONT.
Q2602
SWD 12V
V REF
VDD
Q2604
Q2606
Q2657
Q2662
Q2655
Q2656
Q2661
Q2520
D2659
D2660
D2661
D2662
A-NOR-PB
A-NOR-REC
A.DUB H
A.DUB L
BDA1-13148/VP4H-GIT
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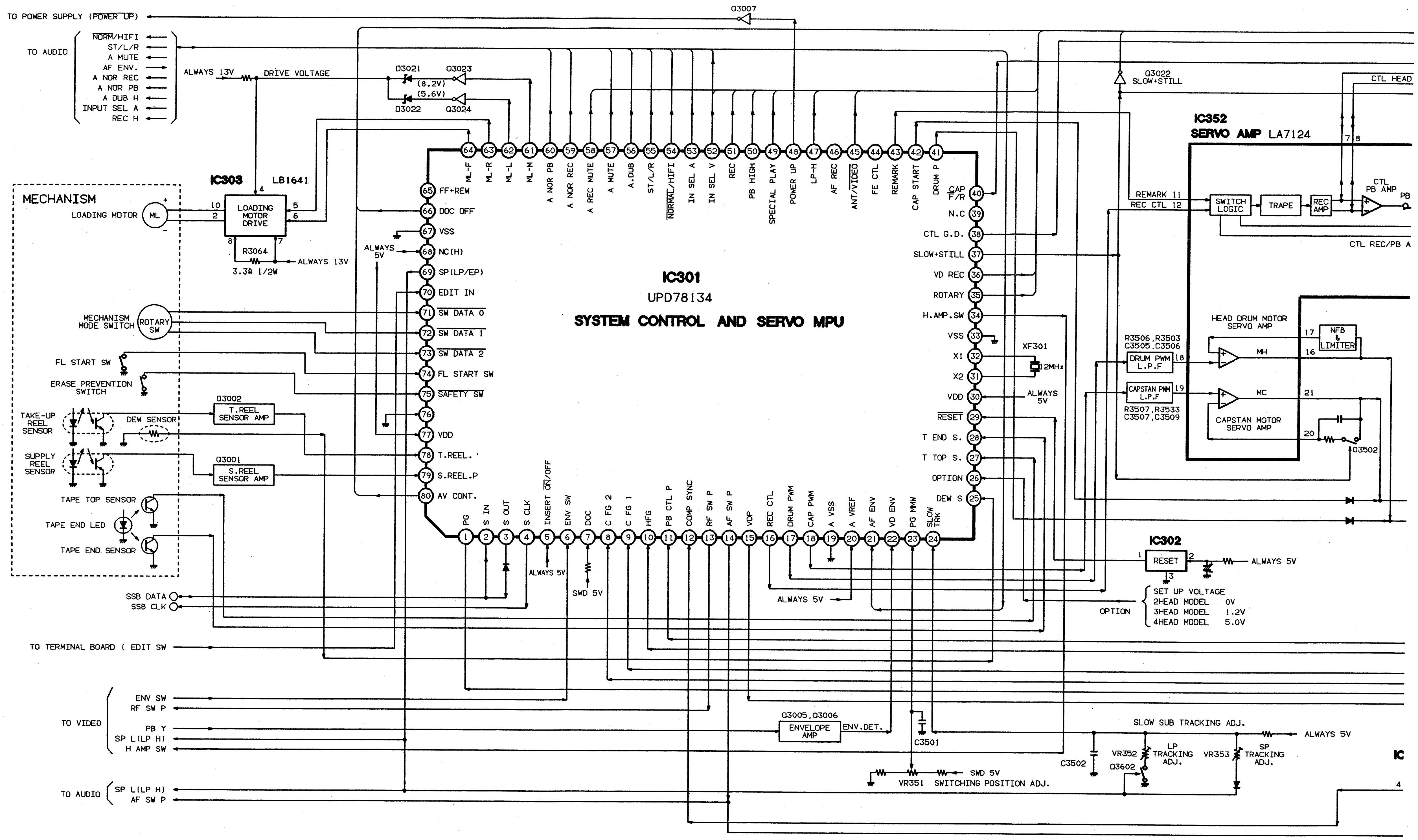
1-5. SYSTEM CONTROL & SERVO CIRCUIT BASIC BLOCK DIAGRAM


TO POWER SUPPLY (POWER UP)
Q3007
TO AUDIO
NORM/HIFI
ST/L/R
A MUTE
AF ENV.
A NOR REC
A NOR PB
A DUB H
INPUT SEL A
REC H
ALWAYS 13V
DRIVE VOLTAGE
D3021
Q3023
(8.2V)
(5.6V)
D3022
Q3024
Q3022
SLOW+STILL
CTL HEAD
IC352
SERVO AMP LA7124
MECHANISM
LOADING MOTOR
ML
IC303
LB1641
LOADING MOTOR DRIVE
R3064
3.3Ω 1/2W
ALWAYS 13V
ALWAYS 5V
IC301
UPD78134
SYSTEM CONTROL AND SERVO MPU
FF+REW
DOC OFF
VSS
NC(H)
SP(LP/EP)
EDIT IN
SW DATA 0
SW DATA 1
SW DATA 2
FL START SW
SAFETY SW
VDD
T.REEL.
S.REEL.P
AV CONT.
ML-F
ML-R
ML-L
ML-M
A NOR PB
A NOR REC
A REC MUTE
A MUTE
A.DUB
ST/L/R
NORMAL/HIFI
IN SEL A
IN SEL V
REC
PB HIGH
SPECIAL PLAY
POWER UP
LP-H
AF REC
ANT/VIDEO
FE CTL
REMARK
CAP START
DRUM P
CAP F/R
N.C
CTL G.D.
SLOW+STILL
VD REC
ROTARY
H.AMP.SW
VSS
X1
X2
VDD
RESET
T END S.
T TOP S.
OPTION
DEW S
PG
S IN
S OUT
S CLK
INSERT ON/OFF
ENV SW
DOC
C FG 2
C FG 1
HFG
PB CTL P
COMP SYNC
RF SW P
AF SW P
VDP
REC CTL
DRUM PWM
CAP PWM
A VSS
A VREF
AF ENV
VD ENV
PG MMV
SLOW TRK
XF301
12MHz
MECHANISM MODE SWITCH
ROTARY SW
FL START SW
ERASE PREVENTION SWITCH
TAKE-UP REEL SENSOR
DEW SENSOR
Q3002
T.REEL SENSOR AMP
SUPPLY REEL SENSOR
Q3001
S.REEL SENSOR AMP
TAPE TOP SENSOR
TAPE END LED
TAPE END SENSOR
REMARK
REC CTL
SWITCH LOGIC
TRAPE
REC AMP
CTL PB AMP
PB
CTL REC/PB A
HEAD DRUM MOTOR SERVO AMP
NFB & LIMITER
MH
MC
CAPSTAN MOTOR SERVO AMP
R3506,R3503
C3505,C3506
DRUM PWM L.P.F
CAPSTAN PWM L.P.F
R3507,R3533
C3507,C3509
Q3502
IC302
RESET
ALWAYS 5V
SET UP VOLTAGE
2HEAD MODEL 0V
3HEAD MODEL 1.2V
4HEAD MODEL 5.0V
OPTION
SSB DATA
SSB CLK
ALWAYS 5V
SWD 5V
TO TERMINAL BOARD (EDIT SW
TO VIDEO
ENV SW
RF SW P
PB Y
SP L(LP H)
H AMP SW
Q3005,Q3006
ENVELOPE AMP
ENV.DET.
C3501
SLOW SUB TRACKING ADJ.
ALWAYS 5V
C3502
VR352
LP TRACKING ADJ.
Q3602
VR353
SP TRACKING ADJ.
VR351
SWITCHING POSITION ADJ.
SWD 5V
TO AUDIO
SP L(LP H)
AF SW P
K
J
I
H
G
F
E
D
C
B
A
1
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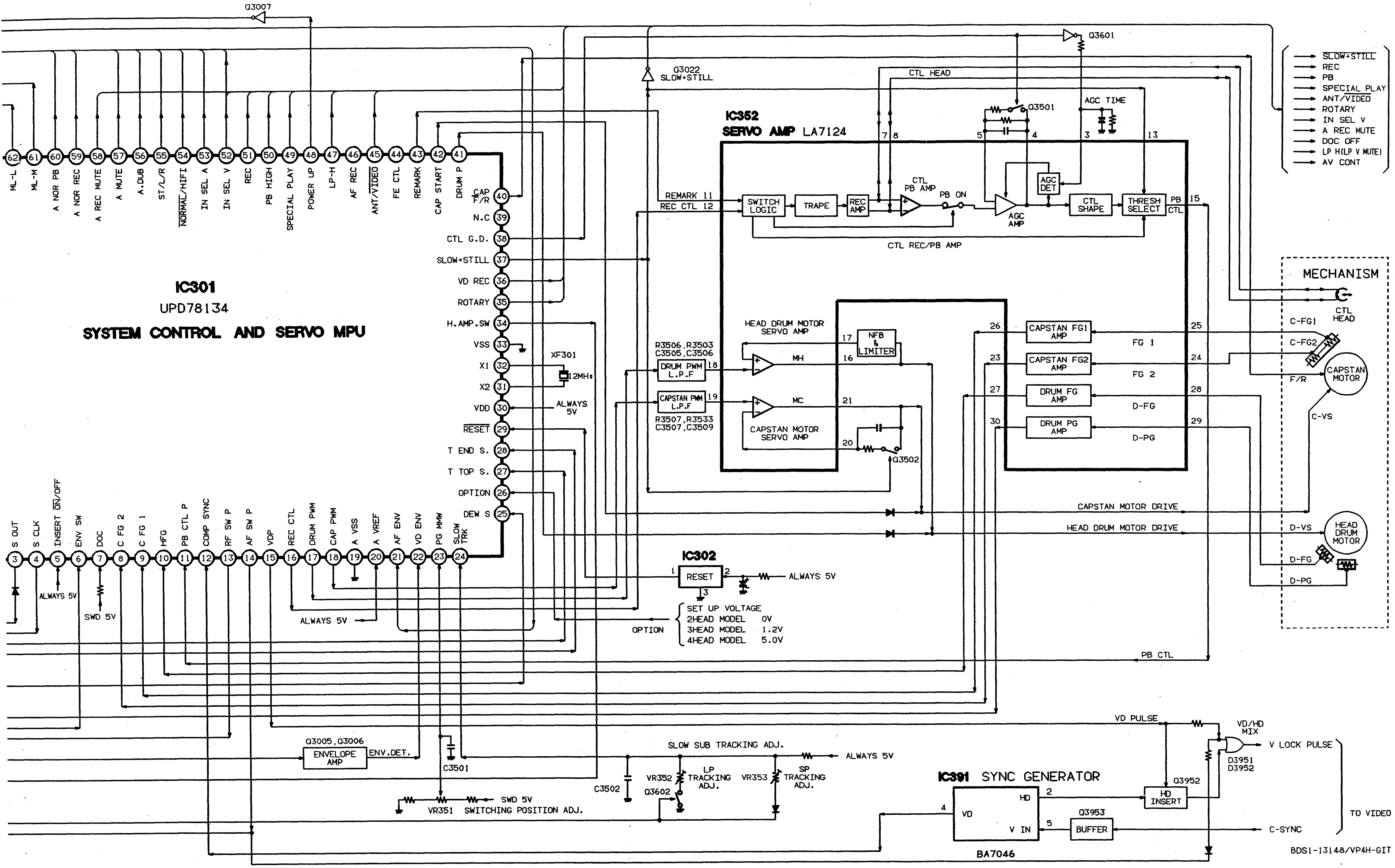
16

1-5. SYSTEM CONTROL & SERVO CIRCUIT BASIC BLOCK DIAGRAM

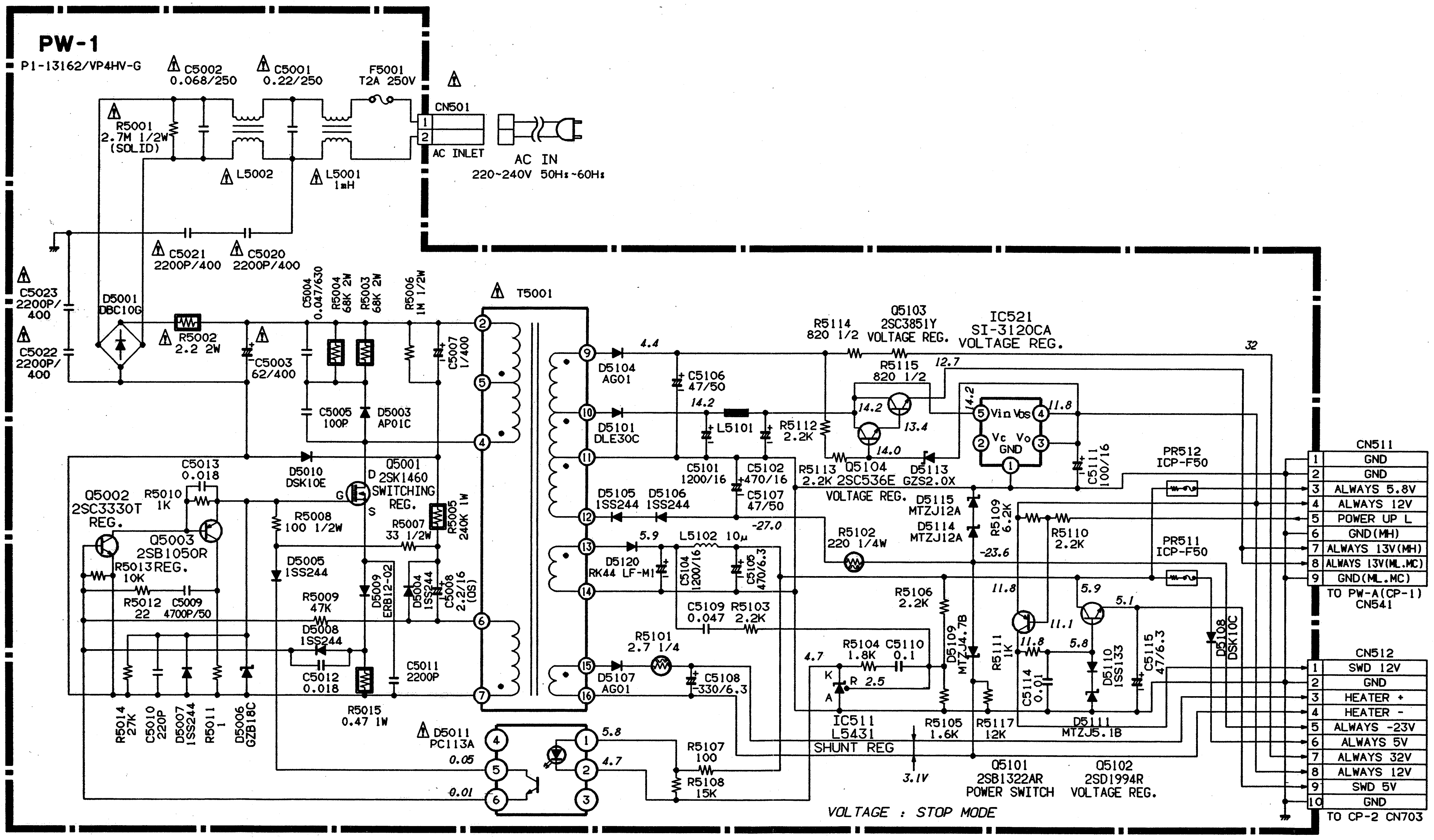

Q3007
Q3601
Q3022
SLOW+STILL
CTL HEAD
AGC TIME
Q3501
IC352
SERVO AMP LA7124
SLOW+STILL
REC
PB
SPECIAL PLAY
ANT/VIDEO
ROTARY
IN SEL V
A REC MUTE
DOC OFF
LP H(LP V MUTE)
AV CONT
TO VIDEO
ML-L
ML-H
A NOR PB
A NOR REC
A REC MUTE
A MUTE
A.DUB
ST/L/R
NORMAL/HIFI
IN SEL A
IN SEL V
REC
PB HIGH
SPECIAL PLAY
POWER UP
LP-H
AF REC
ANT/VIDEO
FE CTL
REMARK
CAP START
DRUM P
CAP F/R
N.C
CTL G.D.
SLOW+STILL
VD REC
ROTARY
H.AMP.SW
VSS
X1
X2
VDD
RESET
T END S.
T TOP S.
OPTION
DEW S
IC301
UPD78134
SYSTEM CONTROL AND SERVO MPU
XF301
12MHz
ALWAYS 5V
REMARK 11
REC CTL 12
SWITCH LOGIC
TRAPE
REC AMP
CTL PB AMP
PB ON
AGC DET
AGC AMP
CTL SHAPE
THRESH SELECT
PB CTL
CTL REC/PB AMP
HEAD DRUM MOTOR SERVO AMP
NFB & LIMITER
MH
MC
R3506,R3503
C3505,C3506
DRUM PWM L.P.F
CAPSTAN PWM L.P.F
R3507,R3533
C3507,C3509
CAPSTAN MOTOR SERVO AMP
Q3502
CAPSTAN FG1 AMP
CAPSTAN FG2 AMP
DRUM FG AMP
DRUM PG AMP
FG 1
FG 2
D-FG
D-PG
MECHANISM
CTL HEAD
C-FG1
C-FG2
F/R
CAPSTAN MOTOR
C-VS
CAPSTAN MOTOR DRIVE
HEAD DRUM MOTOR DRIVE
D-VS
HEAD DRUM MOTOR
D-FG
D-PG
S OUT
S CLK
INSERT ON/OFF
ENV SW
DOC
C FG 2
C FG 1
HFG
PB CTL P
COMP SYNC
RF SW P
AF SW P
VDP
REC CTL
DRUM PWM
CAP PWM
A VSS
A VREF
AF ENV
VD ENV
PG MMW
SLOW TRK
ALWAYS 5V
SWD 5V
ALWAYS 5V
IC302
RESET
ALWAYS 5V
SET UP VOLTAGE
2HEAD MODEL 0V
3HEAD MODEL 1.2V
4HEAD MODEL 5.0V
OPTION
PB CTL
VD PULSE
VD/HD MIX
V LOCK PULSE
D3951
D3952
Q3952
HD INSERT
Q3005,Q3006
ENVELOPE AMP
ENV.DET.
C3501
SLOW SUB TRACKING ADJ.
ALWAYS 5V
VR352
LP TRACKING ADJ.
VR353
SP TRACKING ADJ.
C3502
Q3602
SWD 5V
VR351 SWITCHING POSITION ADJ.
IC391 SYNC GENERATOR
VD
HD
V IN
Q3953
BUFFER
C-SYNC
TO VIDEO
BA7046

BDS1-13148/VP4H-GIT

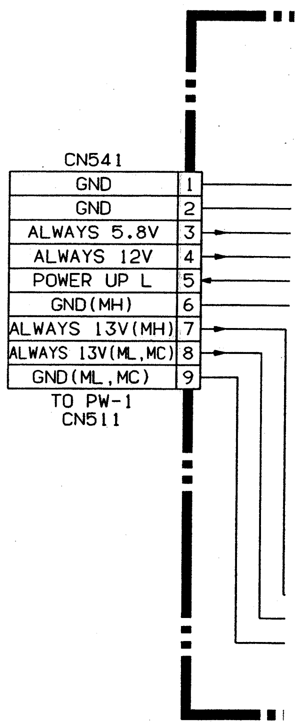
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

2. CIRCUIT DIAGRAM & CIRCUIT BOARD

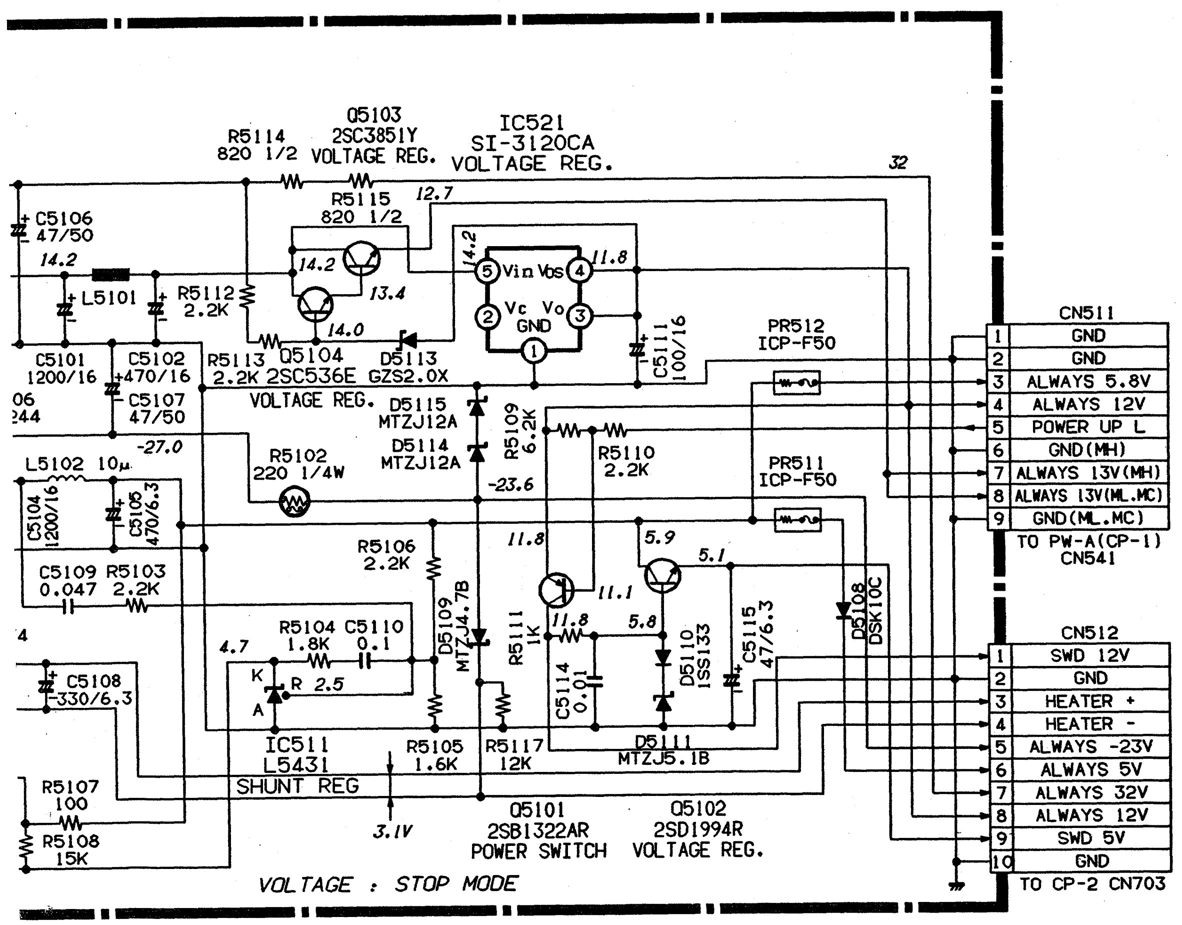
2-1. PW-1 BOARD POWER SUPPLY CIRCUIT DIAGRAM


PW-1
P1-13162/VP4HV-G
C5002 0.068/250
C5001 0.22/250
F5001 T2A 250V
CN501
AC INLET
AC IN
220~240V 50Hz~60Hz
R5001 2.7M 1/2W (SOLID)
L5002
L5001 1mH
C5021 2200P/400
C5020 2200P/400
C5023 2200P/400
C5022 2200P/400
D5001 DBC10G
R5002 2.2 2W
C5003 62/400
C5004 0.047/630
R5004 68K 2W
R5003 68K 2W
R5006 1M 1/2W
C5007 1/400
C5005 100P
D5003 AP01C
T5001
C5013 0.018
D5010 DSK10E
Q5001 2SK1460 SWITCHING REG.
Q5002 2SC3330T REG.
R5010 1K
Q5003 2SB1050R REG.
R5013 10K
R5012 22
C5009 4700P/50
R5008 100 1/2W
R5007 33 1/2W
R5005 240K 1W
D5005 1SS244
R5009 47K
D5009 ERB12-02
D5004 1SS244
C5008 2.2/16 (OS)
D5008 1SS244
C5012 0.018
C5011 2200P
R5015 0.47 1W
R5014 27K
C5010 220P
D5007 1SS244
R5011 1
D5006 GZB18C
D5011 PC113A
0.05
0.01
5.8
4.7
D5104 AG01
4.4
C5106 47/50
14.2
D5101 DLE30C
L5101
R5112 2.2K
R5114 820 1/2
Q5103 2SC3851Y VOLTAGE REG.
IC521 SI-3120CA VOLTAGE REG.
R5115 820 1/2
12.7
32
14.2
13.4
14.0
11.8
14.2
Vin Vos
Vc Vo
GND
C5111 100/16
C5101 1200/16
C5102 470/16
C5107 47/50
-27.0
R5113 2.2K
Q5104 2SC536E VOLTAGE REG.
D5113 GZS2.0X
D5115 MTZJ12A
D5114 MTZJ12A
R5109 6.2K
-23.6
D5105 1SS244
D5106 1SS244
5.9
L5102 10μ
D5120 RK44 LF-M1
C5104 1200/16
C5105 470/6.3
R5102 220 1/4W
R5110 2.2K
PR512 ICP-F50
PR511 ICP-F50
C5109 0.047
R5103 2.2K
R5106 2.2K
11.8
11.1
5.9
5.1
11.8
5.8
R5101 2.7 1/4
D5107 AG01
C5108 330/6.3
4.7
R5104 1.8K
C5110 0.1
K R 2.5 A
IC511 L5431 SHUNT REG
D5109 MTZJ4.7B
R5111 1K
C5114 0.01
D5110 1SS133
C5115 47/6.3
D5108 DSK10C
R5107 100
R5108 15K
R5105 1.6K
R5117 12K
D5111 MTZJ5.1B
3.1V
Q5101 2SB1322AR POWER SWITCH
Q5102 2SD1994R VOLTAGE REG.
VOLTAGE : STOP MODE
CN511
1 GND
2 GND
3 ALWAYS 5.8V
4 ALWAYS 12V
5 POWER UP L
6 GND(MH)
7 ALWAYS 13V(MH)
8 ALWAYS 13V(ML.MC)
9 GND(ML.MC)
TO PW-A(CP-1) CN541
CN512
1 SWD 12V
2 GND
3 HEATER +
4 HEATER -
5 ALWAYS -23V
6 ALWAYS 5V
7 ALWAYS 32V
8 ALWAYS 12V
9 SWD 5V
10 GND
TO CP-2 CN703

2-2.

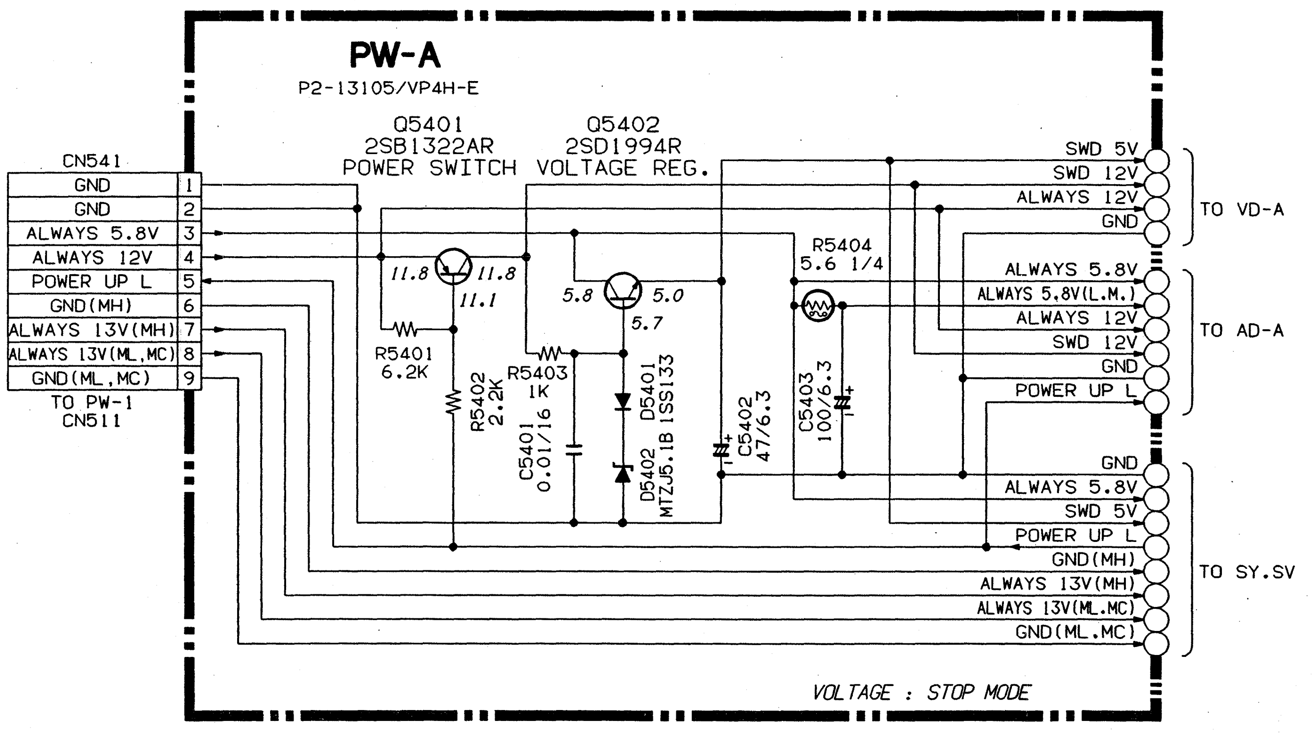

CN541
GND 1
GND 2
ALWAYS 5.8V 3
ALWAYS 12V 4
POWER UP L 5
GND(MH) 6
ALWAYS 13V(MH) 7
ALWAYS 13V(ML,MC) 8
GND(ML,MC) 9
TO PW-1 CN511

JPPLY CIRCUIT DIAGRAM



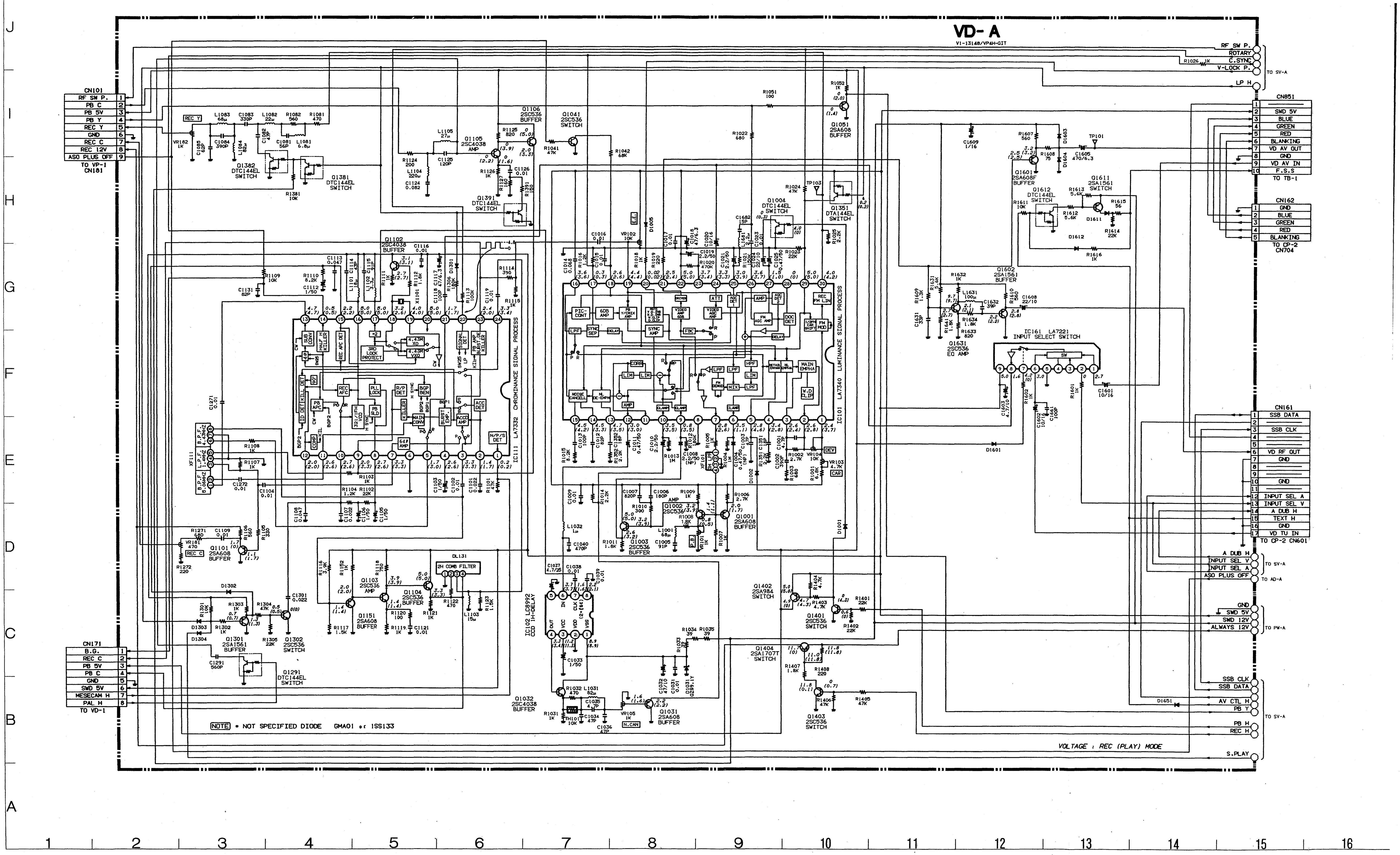
Q5103
2SC3851Y
VOLTAGE REG.
IC521
SI-3120CA
VOLTAGE REG.
R5114
820 1/2
R5115
820 1/2
C5106
47/50
L5101
R5112
2.2K
C5101
1200/16
C5102
470/16
C5107
47/50
R5113
2.2K
Q5104
2SC536E
VOLTAGE REG.
D5113
GZS2.0X
D5115
MTZJ12A
D5114
MTZJ12A
R5109
6.2K
R5110
2.2K
C5111
100/16
PR512
ICP-F50
PR511
ICP-F50
L5102 10μ
C5104
1200/16
C5105
470/6.3
C5109 0.047
R5103 2.2K
R5102
220 1/4W
R5106
2.2K
D5109
MTZJ4.7B
R5111
1K
C5114
0.01
D5110
1SS133
C5115
47/6.3
D5108
DSK10C
D5111
MTZJ5.1B
R5104 1.8K
C5110 0.1
C5108
330/6.3
IC511
L5431
SHUNT REG
R5105
1.6K
R5117
12K
R5107
100
R5108
15K
Q5101
2SB1322AR
POWER SWITCH
Q5102
2SD1994R
VOLTAGE REG.
CN511
1 GND
2 GND
3 ALWAYS 5.8V
4 ALWAYS 12V
5 POWER UP L
6 GND(MH)
7 ALWAYS 13V(MH)
8 ALWAYS 13V(ML.MC)
9 GND(ML.MC)
TO PW-A(CP-1) CN541
CN512
1 SWD 12V
2 GND
3 HEATER +
4 HEATER -
5 ALWAYS -23V
6 ALWAYS 5V
7 ALWAYS 32V
8 ALWAYS 12V
9 SWD 5V
10 GND
TO CP-2 CN703
14.2
14.2
13.4
14.0
12.7
11.8
32
-27.0
-23.6
11.8
11.1
5.9
5.1
11.8
5.8
4.7
R 2.5
3.1V
VOLTAGE : STOP MODE

2-2. CP-1 BOARD (PW-A) POWER SUPPLY CIRCUIT DIAGRAM



PW-A
P2-13105/VP4H-E
Q5401
2SB1322AR
POWER SWITCH
Q5402
2SD1994R
VOLTAGE REG.
CN541
1 GND
2 GND
3 ALWAYS 5.8V
4 ALWAYS 12V
5 POWER UP L
6 GND(MH)
7 ALWAYS 13V(MH)
8 ALWAYS 13V(ML,MC)
9 GND(ML,MC)
TO PW-1 CN511
R5401
6.2K
R5402
2.2K
R5403
1K
C5401
0.01/16
D5401
1SS133
D5402
MTZJ5.1B
C5402
47/6.3
R5404
5.6 1/4
C5403
100/6.3
11.8
11.8
11.1
5.8
5.0
5.7
SWD 5V
SWD 12V
ALWAYS 12V
GND
TO VD-A
ALWAYS 5.8V
ALWAYS 5.8V(L.M.)
ALWAYS 12V
SWD 12V
GND
POWER UP L
TO AD-A
GND
ALWAYS 5.8V
SWD 5V
POWER UP L
GND(MH)
ALWAYS 13V(MH)
ALWAYS 13V(ML.MC)
GND(ML.MC)
TO SY.SV
VOLTAGE : STOP MODE

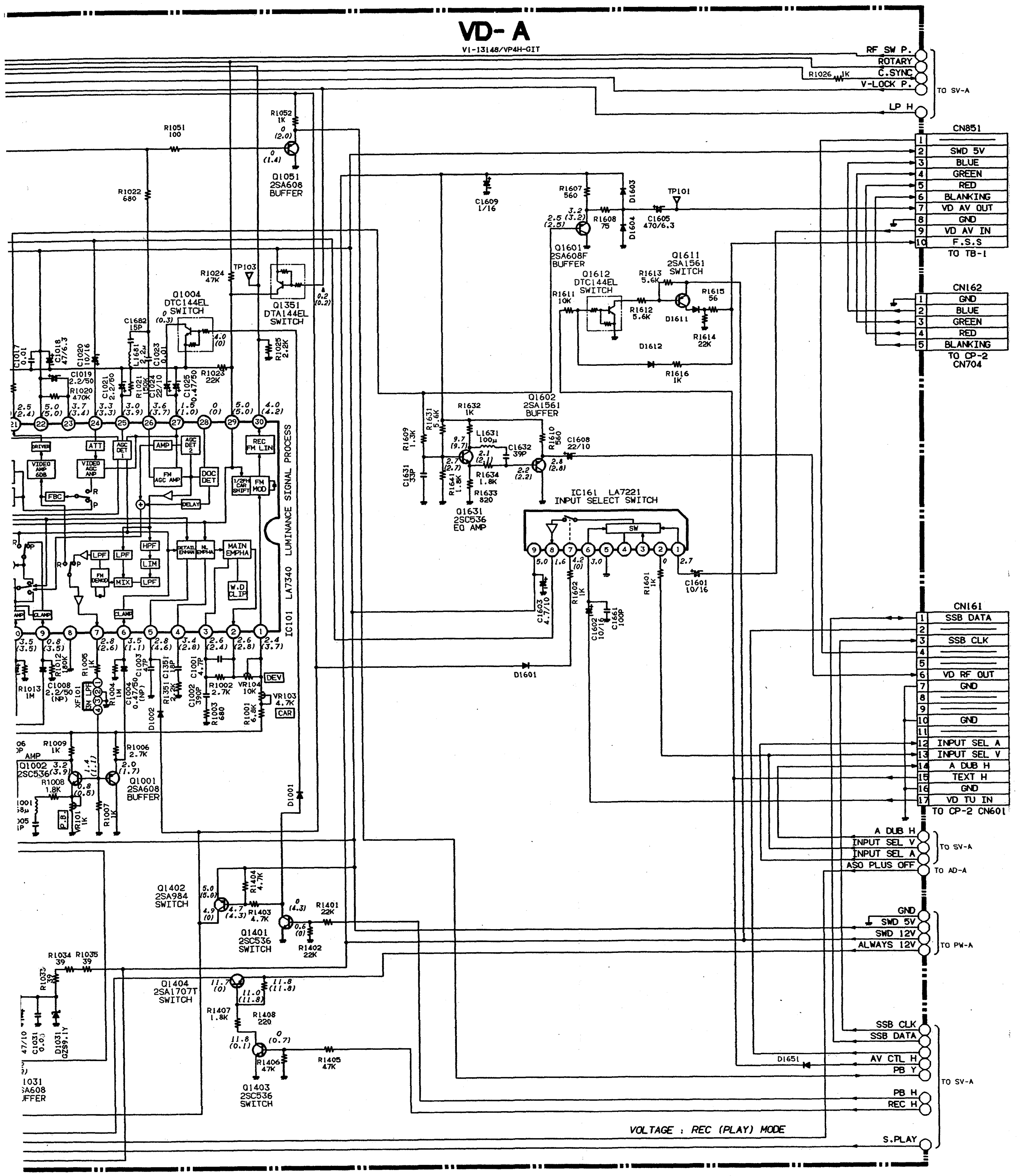
2-3. CP-1 BOARD (VD-A) VIDEO CIRCUIT DIAGRAM


VD-A
V1-13148/VP4H-GIT
CN101
1 RF SW P.
2 PB C
3 PB 5V
4 PB Y
5 REC Y
6 GND
7 REC C
8 REC 12V
9 ASO PLUS OFF
TO VP-1 CN181
CN171
1 B.G.
2 REC C
3 PB 5V
4 PB C
5 GND
6 SWD 5V
7 MESECAM H
8 PAL H
TO VD-1
IC111 LA7332 CHROMINANCE SIGNAL PROCESS
IC101 LA7340 LUMINANCE SIGNAL PROCESS
IC102 LC8992 CCD 1H-DELAY
IC161 LA7221 INPUT SELECT SWITCH
DL131 2H COMB FILTER
Q1102 2SC4038 BUFFER
Q1105 2SC4038 AMP
Q1106 2SC536 BUFFER
Q1041 2SC536 SWITCH
Q1051 2SA608 BUFFER
Q1391 DTC144EL SWITCH
Q1381 DTC144EL SWITCH
Q1382 DTC144EL SWITCH
Q1004 DTC144EL SWITCH
Q1351 DTA144EL SWITCH
Q1101 2SA608 BUFFER
Q1301 2SA1561 BUFFER
Q1302 2SC536 SWITCH
Q1291 DTC144EL SWITCH
Q1151 2SA608 BUFFER
Q1103 2SC536 AMP
Q1104 2SC536 BUFFER
Q1001 2SA608 BUFFER
Q1002 2SC536 AMP
Q1003 2SC536 BUFFER
Q1031 2SA608 BUFFER
Q1032 2SC4038 BUFFER
Q1401 2SC536 SWITCH
Q1402 2SA984 SWITCH
Q1403 2SC536 SWITCH
Q1404 2SA1707T SWITCH
Q1601 2SA608F BUFFER
Q1602 2SA1561 BUFFER
Q1611 2SA1561 SWITCH
Q1612 DTC144EL SWITCH
Q1631 2SC536 EQ AMP
XF111
RF SW P.
ROTARY
C.SYNC
V-LOCK P.
LP H
TO SV-A
CN851
1
2 SWD 5V
3 BLUE
4 GREEN
5 RED
6 BLANKING
7 VD AV OUT
8 GND
9 VD AV IN
10 F.S.S
TO TB-1
CN162
1 GND
2 BLUE
3 GREEN
4 RED
5 BLANKING
TO CP-2 CN704
CN161
1 SSB DATA
2
3 SSB CLK
4
5
6 VD RF OUT
7 GND
8
9
10 GND
11
12 INPUT SEL A
13 INPUT SEL V
14 A DUB H
15 TEXT H
16 GND
17 VD TU IN
TO CP-2 CN601
A DUB H
INPUT SEL V
INPUT SEL A
ASO PLUS OFF
TO SV-A
TO AD-A
GND
SWD 5V
SWD 12V
ALWAYS 12V
TO PW-A
SSB CLK
SSB DATA
AV CTL H
PB Y
PB H
REC H
S.PLAY
TO SV-A
A B C D E F G H I J K
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

NOTE • NOT SPECIFIED DIODE GMA01 or 1SS133

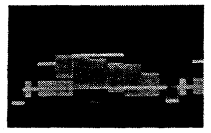
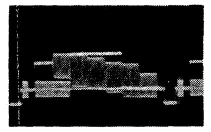
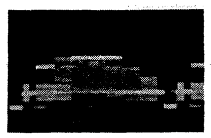
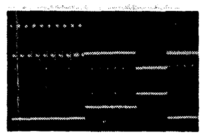
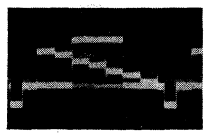
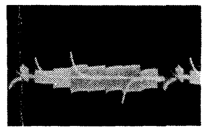
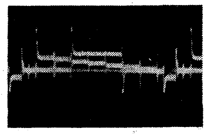
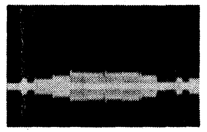
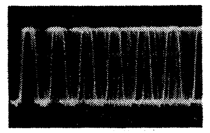
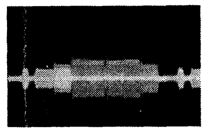
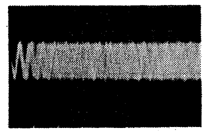
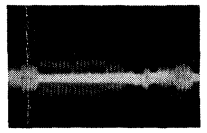
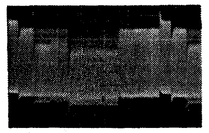
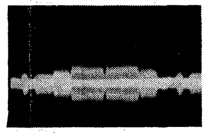
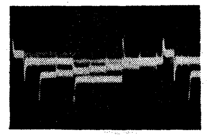
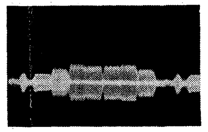
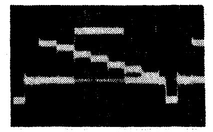
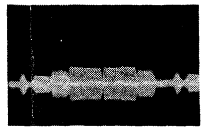
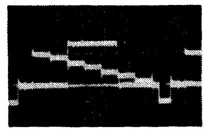
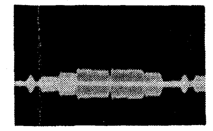
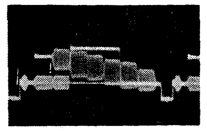
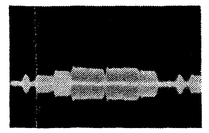
VOLTAGE : REC (PLAY) MODE

IDEO CIRCUIT DIAGRAM

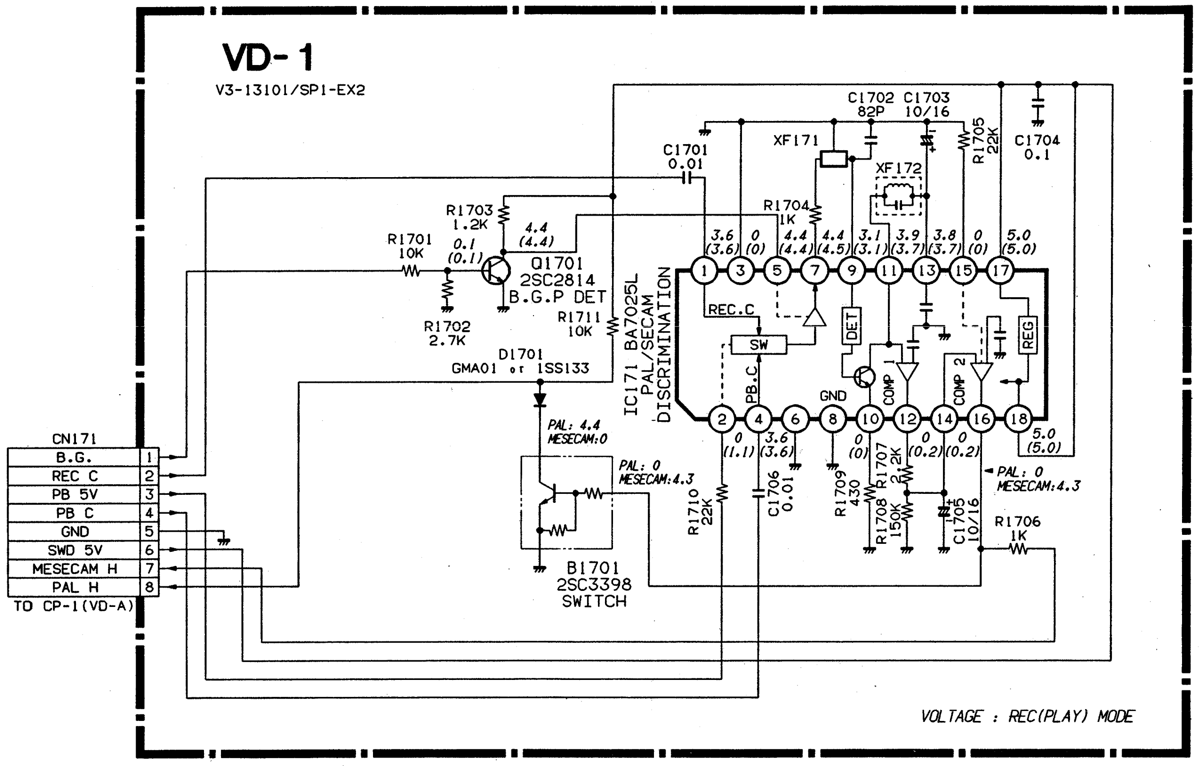

VD- A
VI-13148/VP4H-GIT
RF SW P.
ROTARY
C.SYNC
V-LOCK P.
TO SV-A
LP H
CN851
SWD 5V
BLUE
GREEN
RED
BLANKING
VD AV OUT
GND
VD AV IN
F.S.S
TO TB-1
CN162
GND
BLUE
GREEN
RED
BLANKING
TO CP-2 CN704
Q1051 2SA608 BUFFER
Q1004 DTC144EL SWITCH
Q1351 DTA144EL SWITCH
Q1601 2SA608F BUFFER
Q1612 DTC144EL SWITCH
Q1611 2SA1561 SWITCH
Q1602 2SA1561 BUFFER
Q1631 2SC536 EQ AMP
IC161 LA7221 INPUT SELECT SWITCH
IC101 LA7340 LUMINANCE SIGNAL PROCESS
TP101
TP103
CN161
SSB DATA
SSB CLK
VD RF OUT
GND
GND
INPUT SEL A
INPUT SEL V
A DUB H
TEXT H
GND
VD TU IN
TO CP-2 CN601
A DUB H
INPUT SEL V
INPUT SEL A
TO SV-A
ASO PLUS OFF
TO AD-A
GND
SWD 5V
SWD 12V
ALWAYS 12V
TO PW-A
SSB CLK
SSB DATA
AV CTL H
PB Y
TO SV-A
PB H
REC H
S.PLAY
Q1001 2SA608 BUFFER
Q1002 2SC536
Q1402 2SA984 SWITCH
Q1401 2SC536 SWITCH
Q1404 2SA1707T SWITCH
Q1403 2SC536 SWITCH
1031 SA608 UFFER
D1601
D1651
VOLTAGE : REC (PLAY) MODE

2-4. WAVEFORM OF VIDEO

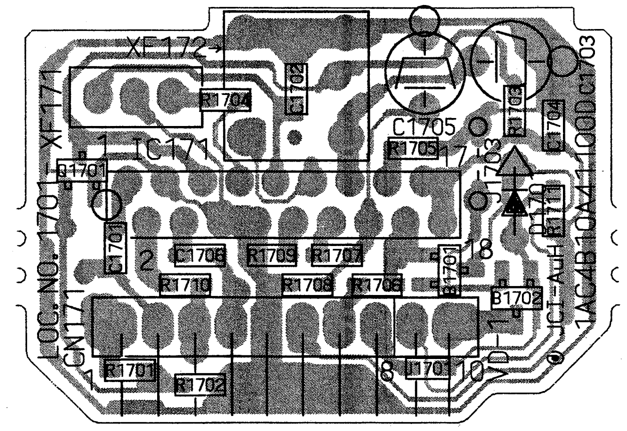
WF-V-SP

TEST LOCATION	WAVEFORM	MODE/LEVEL	TEST LOCATION	WAVEFORM	MODE/LEVEL
IC101 Pin 24		REC, EE 1 Vp-p	IC101 Pin 21		REC, EE 2 Vp-p
IC101 Pin 7		REC, EE 1 Vp-p	IC101 (UPPER) Pin 21 (LOWER) Pin 20		STILL (UPPER) 2 Vp-p (LOWER) 5 Vp-p
IC101 Pin 6		REC, EE 0.45 Vp-p	IC111 Pin 21		REC, EE 1 Vp-p
IC101 Pin 2		REC, EE 1.3 Vp-p	IC111 Pin 3		REC, EE 0.14 Vp-p
IC101 Pin 30		REC, EE 1.5 Vp-p	IC111 Pin 9		REC, EE 0.8Vp-p
IC101 Pin 26		PB 0.8 Vp-p	Q1105 Base		PB 0.1 Vp-p
IC101 Pin 7		PB 2.0 Vp-p	Q1106 Emitter		PB 1.2 Vp-p
Q1002 Base		PB 0.5 Vp-p	IC111 Pin 7		PB 0.5 Vp-p
IC101 Pin 9		PB 0.6 Vp-p	IC111 Pin 5		PB 1.2 Vp-p
IC101 Pins 10/12		PB 0.5 Vp-p	IC111 Pin 24		PB 0.22 Vp-p
IC101 Pin 21		PB 2 Vp-p	IC111 Pin 23		PB 0.6 Vp-p

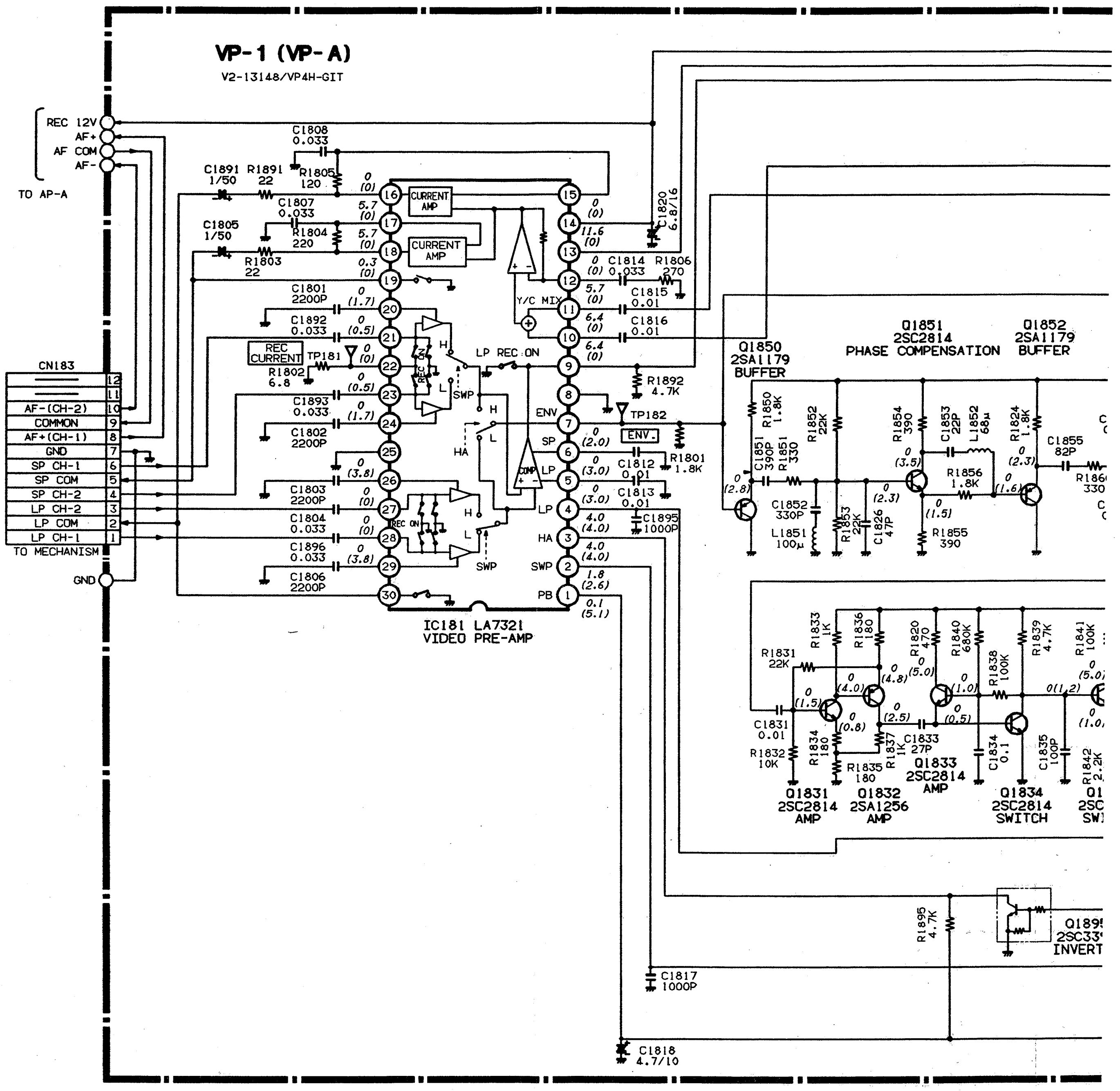
2-5. VD-1 BOARD MESECAM DISCRIMINATION CIRCUIT DIAGRAM


VD-1
V3-13101/SP1-EX2
CN171
B.G. 1
REC C 2
PB 5V 3
PB C 4
GND 5
SWD 5V 6
MESECAM H 7
PAL H 8
TO CP-1(VD-A)
R1701 10K
R1702 2.7K
R1703 1.2K
Q1701 2SC2814 B.G.P DET
R1711 10K
D1701 GMA01 or 1SS133
C1701 0.01
XF171
XF172
C1702 82P
C1703 10/16
R1705 22K
C1704 0.1
R1704 1K
IC171 BA7025L PAL/SECAM DISCRIMINATION
REC.C
SW
DET
PB.C
GND
COMP 1
COMP 2
REG
PAL: 4.4
MESECAM: 0
PAL: 0
MESECAM: 4.3
B1701 2SC3398 SWITCH
R1710 22K
C1706 0.01
R1709 430
R1708 150K
R1707 2.2K
C1705 10/16
R1706 1K
VOLTAGE : REC(PLAY) MODE

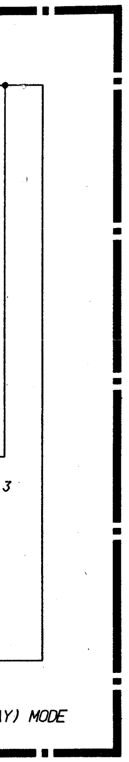
2-6. VD-1 CIRCUIT BOARD


XF172
XF171
R1704
C1702
C1705
R1705
R1703
C1704
C1703
IC171
Q1701
C1701
C1706
R1709
R1707
R1710
R1708
R1706
B1701
B1702
R1701
R1702
J1701
CN171
LOC. NO. 1701
1AC4B10A41100

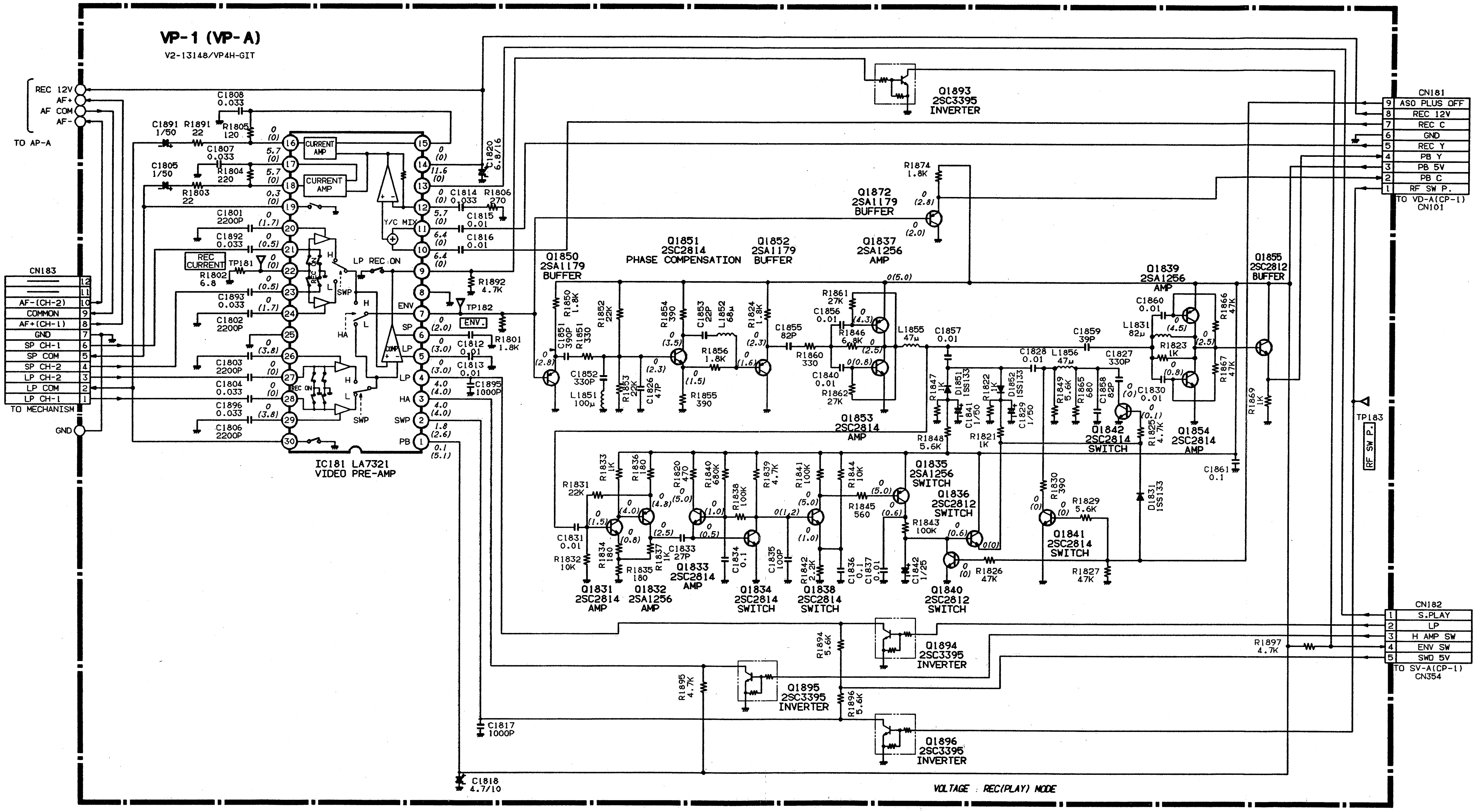
2-7. VP-1 BOARD (VP-A) VIDEO PRE-AI


VP-1 (VP-A)
V2-13148/VP4H-GIT
REC 12V
AF+
AF COM
AF-
TO AP-A
CN183
AF-(CH-2)
COMMON
AF+(CH-1)
GND
SP CH-1
SP COM
SP CH-2
LP CH-2
LP COM
LP CH-1
TO MECHANISM
GND
C1808 0.033
C1891 1/50
R1891 22
R1805 120
C1807 0.033
C1805 1/50
R1804 220
R1803 22
CURRENT AMP
C1801 2200P
C1892 0.033
REC CURRENT
TP181
R1802 6.8
C1893 0.033
C1802 2200P
C1803 2200P
C1804 0.033
C1896 0.033
C1806 2200P
Y/C MIX
LP REC ON
SWP
ENV
C1820 6.8/16
C1814 0.033
R1806 270
C1815 0.01
C1816 0.01
R1892 4.7K
TP182
ENV.
C1812 0.01
R1801 1.8K
C1813 0.01
C1895 1000P
IC181 LA7321 VIDEO PRE-AMP
Q1850 2SA1179 BUFFER
Q1851 2SC2814 PHASE COMPENSATION
Q1852 2SA1179 BUFFER
R1850 1.8K
R1851 330
C1851 390P
C1852 330P
L1851 100μ
R1852 22K
R1853 22K
C1826 47P
R1854 390
C1853 22P
L1852 68μ
R1856 1.8K
R1855 390
R1824 1.8K
C1855 82P
R1831 22K
C1831 0.01
R1832 10K
R1833 1K
R1834 180
R1836 180
R1835 180
R1837 1K
C1833 27P
R1820 470
R1840 680K
R1838 100K
R1839 4.7K
C1834 0.1
C1835 100P
R1841 100K
R1842 2.2K
Q1831 2SC2814 AMP
Q1832 2SA1256 AMP
Q1833 2SC2814 AMP
Q1834 2SC2814 SWITCH
R1895 4.7K
C1817 1000P
C1818 4.7/10
2SC33
INVERT

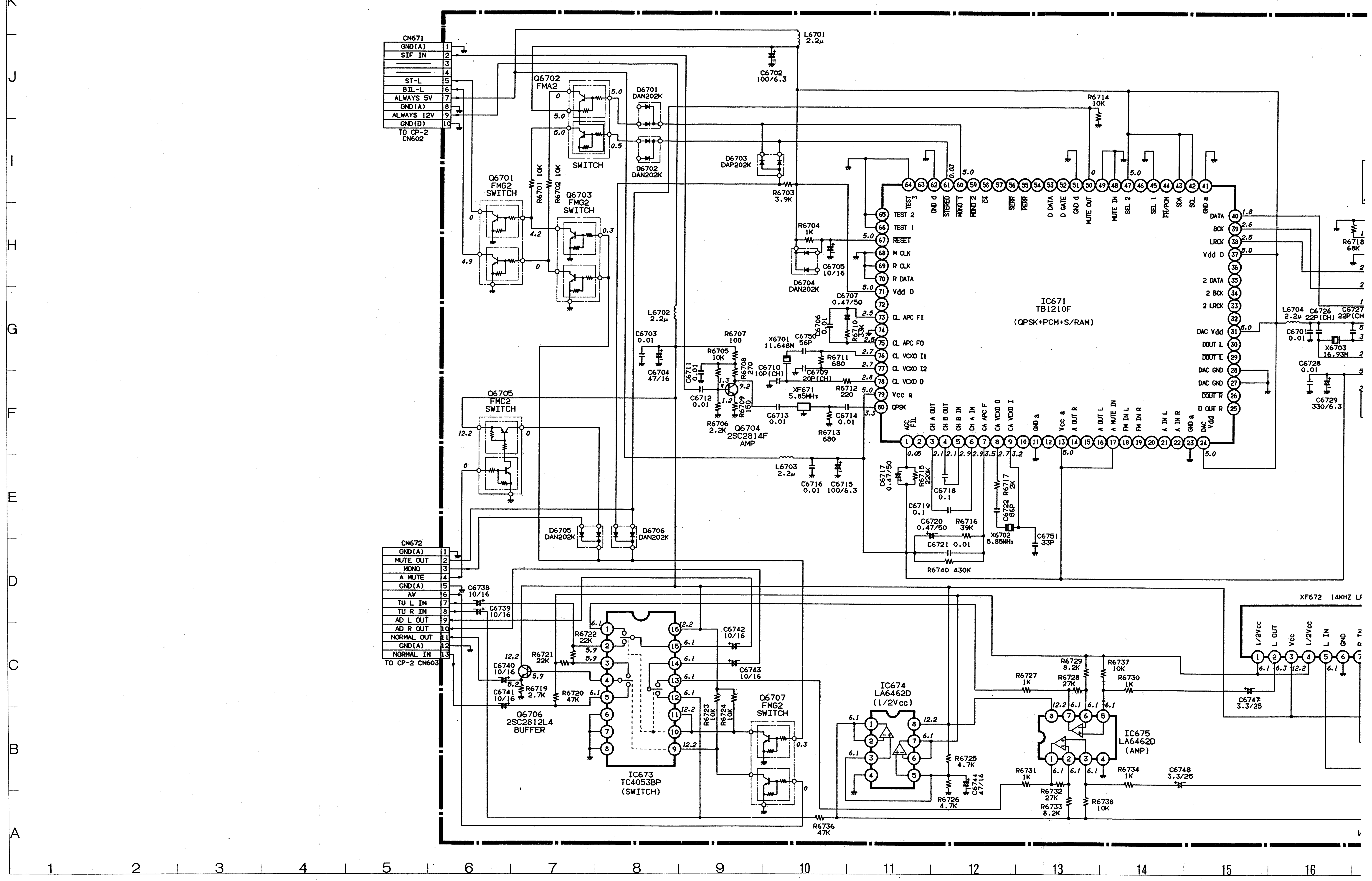
RAM



2-7. VP-1 BOARD (VP-A) VIDEO PRE-AMP CIRCUIT DIAGRAM


VP-1 (VP-A)
V2-13148/VP4H-GIT
REC 12V
AF+
AF COM
AF-
TO AP-A
CN183
AF-(CH-2)
COMMON
AF+(CH-1)
GND
SP CH-1
SP COM
SP CH-2
LP CH-2
LP COM
LP CH-1
TO MECHANISM
GND
IC181 LA7321
VIDEO PRE-AMP
CURRENT AMP
REC CURRENT
TP181
Y/C MIX
LP REC ON
ENV
SP
LP
HA
SWP
PB
TP182
ENV.
Q1850
2SA1179
BUFFER
Q1851
2SC2814
PHASE COMPENSATION
Q1852
2SA1179
BUFFER
Q1837
2SA1256
AMP
Q1872
2SA1179
BUFFER
Q1893
2SC3395
INVERTER
Q1839
2SA1256
AMP
Q1855
2SC2812
BUFFER
Q1853
2SC2814
AMP
Q1842
2SC2814
SWITCH
Q1854
2SC2814
AMP
Q1831
2SC2814
AMP
Q1832
2SA1256
AMP
Q1833
2SC2814
AMP
Q1834
2SC2814
SWITCH
Q1838
2SC2814
SWITCH
Q1835
2SA1256
SWITCH
Q1836
2SC2812
SWITCH
Q1840
2SC2812
SWITCH
Q1841
2SC2814
SWITCH
Q1894
2SC3395
INVERTER
Q1895
2SC3395
INVERTER
Q1896
2SC3395
INVERTER
CN181
9 ASO PLUS OFF
8 REC 12V
7 REC C
6 GND
5 REC Y
4 PB Y
3 PB 5V
2 PB C
1 RF SW P.
TO VD-A(CP-1) CN101
TP183
RF SW P.
CN182
1 S.PLAY
2 LP
3 H AMP SW
4 ENV SW
5 SWD 5V
TO SV-A(CP-1) CN354
R1897 4.7K
C1817 1000P
C1818 4.7/10
D1831 1SS133
C1861 0.1
VOLTAGE : REC(PLAY) MODE

2-8. TN-5 BOARD NICAM DECODER CIRCUIT DIAGRAM (OPTION)



CN671
GND(A)
SIF IN
ST-L
BIL-L
ALWAYS 5V
GND(A)
ALWAYS 12V
GND(D)
TO CP-2 CN602
L6701 2.2μ
C6702 100/6.3
Q6702 FMA2
D6701 DAN202K
D6702 DAN202K
SWITCH
D6703 DAP202K
R6703 3.9K
R6714 10K
Q6701 FMG2 SWITCH
R6701 10K
R6702 10K
Q6703 FMG2 SWITCH
R6704 1K
D6704 DAN202K
C6705 10/16
C6707 0.47/50
C6706 0.01
R6710 33K
L6702 2.2μ
C6703 0.01
C6704 47/16
R6707 100
R6705 10K
R6708 270
C6711 0.01
C6712 0.01
R6709 150
R6706 2.2K
Q6704 2SC2814F AMP
X6701 11.648M
C6750 56P
C6710 10P(CH)
R6711 680
C6709 20P(CH)
XF671 5.85MHz
R6712 220
C6713 0.01
C6714 0.01
R6713 680
L6703 2.2μ
C6716 0.01
C6715 100/6.3
IC671 TB1210F (QPSK+PCM+S/RAM)
TEST 2
TEST 1
RESET
M CLK
R CLK
R DATA
Vdd D
CL APC FI
CL APC FO
CL VCXO I1
CL VCXO I2
CL VCXO O
Vcc a
QPSK
DATA
BCK
LRCK
Vdd D
2 DATA
2 BCK
2 LRCK
DAC Vdd
DOUT L
DAC GND
DOUT R
D OUT R
C6717 0.47/50
R6715 220K
C6718 0.1
C6719 0.1
C6720 0.47/50
R6716 39K
C6721 0.01
R6740 430K
R6717 2K
C6722 56P
X6702 5.85MHz
C6751 33P
L6704 2.2μ
C6726 22P(CH)
C6727 22P(CH)
C6701 0.01
X6703 16.93M
C6728 0.01
C6729 330/6.3
R6718 68K
Q6705 FMC2 SWITCH
D6705 DAN202K
D6706 DAN202K
CN672
GND(A)
MUTE OUT
MONO
A MUTE
GND(A)
AV
TU L IN
TU R IN
AD L OUT
AD R OUT
NORMAL OUT
GND(A)
NORMAL IN
TO CP-2 CN603
C6738 10/16
C6739 10/16
C6740 10/16
C6741 10/16
R6721 22K
R6719 2.7K
R6720 47K
R6722 22K
Q6706 2SC2812L4 BUFFER
IC673 TC4053BP (SWITCH)
C6742 10/16
C6743 10/16
R6723 10K
R6724 10K
Q6707 FMG2 SWITCH
R6736 47K
IC674 LA6462D (1/2Vcc)
R6725 4.7K
R6726 4.7K
C6744 47/16
IC675 LA6462D (AMP)
R6727 1K
R6728 27K
R6729 8.2K
R6737 10K
R6730 1K
R6731 1K
R6732 27K
R6733 8.2K
R6738 10K
R6734 1K
C6747 3.3/25
C6748 3.3/25
XF672 14KHZ L
1/2Vcc
L OUT
Vcc
L IN
GND
K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
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10
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12
13
14
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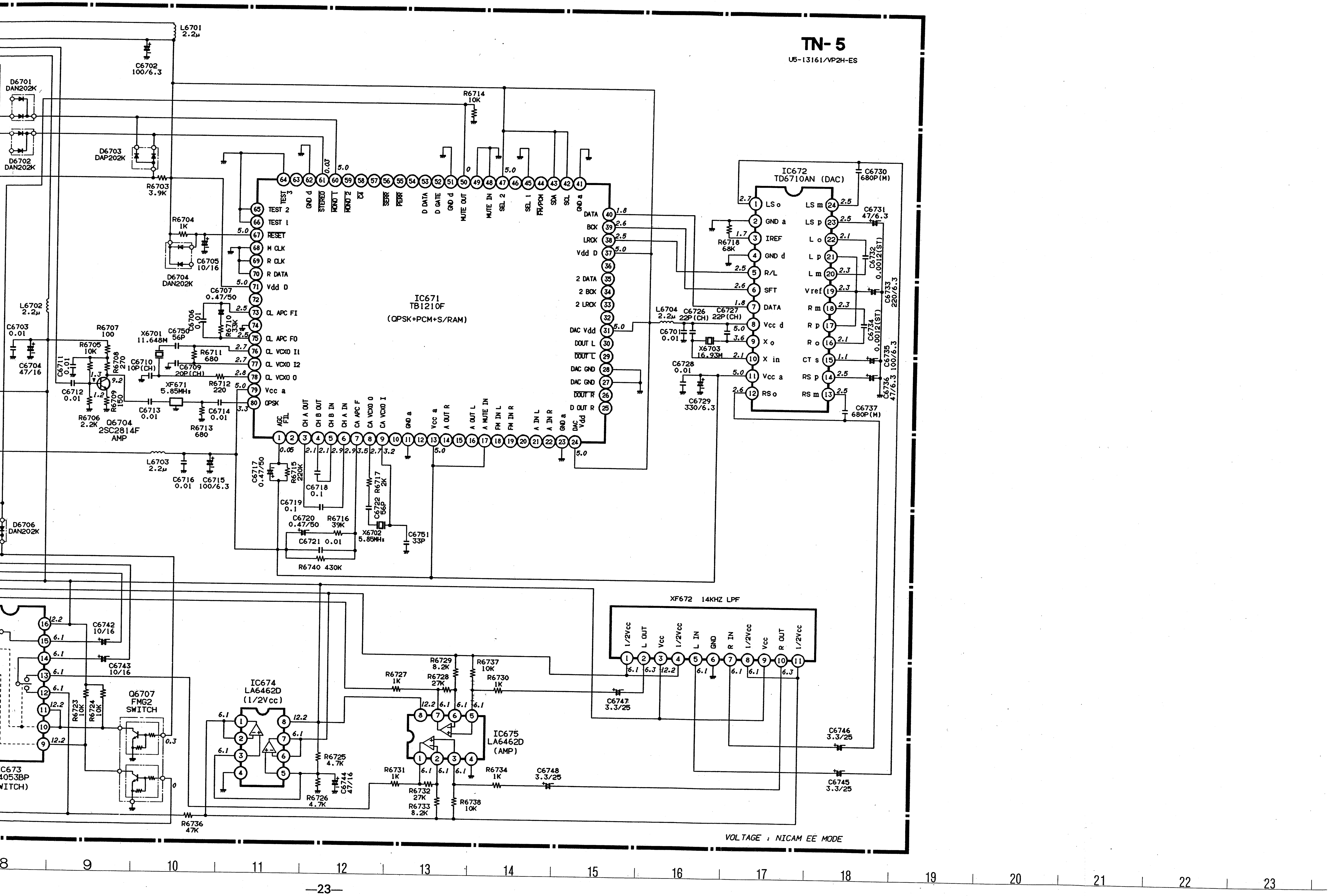
16

2-8. TN-5 BOARD NICAM DECODER CIRCUIT DIAGRAM (OPTION)


TN-5
U5-13161/VP2H-ES
IC671
TB1210F
(QPSK+PCM+S/RAM)
IC672
TD6710AN (DAC)
XF672 14KHZ LPF
IC674
LA6462D
(1/2Vcc)
IC675
LA6462D
(AMP)
Q6707
FMG2
SWITCH
Q6704
2SC2814F
AMP
C673
4053BP
WITCH)
L6701 2.2µ
C6702 100/6.3
D6701 DAN202K
D6702 DAN202K
D6703 DAP202K
R6703 3.9K
R6704 1K
D6704 DAN202K
C6705 10/16
R6714 10K
L6702 2.2µ
C6703 0.01
C6704 47/16
R6707 100
R6705 10K
X6701 11.648M
C6750 56P
C6706 0.01
C6707 0.47/50
R6710 33K
R6711 680
C6710 10P(CH)
C6709 20P(CH)
R6708 270
R6709 150
C6711 0.01
C6712 0.01
R6706 2.2K
XF671 5.85MHz
R6712 220
C6713 0.01
C6714 0.01
R6713 680
L6703 2.2µ
C6716 0.01
C6715 100/6.3
D6706 DAN202K
C6717 0.47/50
R6715 220K
C6718 0.1
C6719 0.1
C6720 0.47/50
R6716 39K
C6721 0.01
R6740 430K
R6717 2K
C6722 56P
X6702 5.85MHz
C6751 33P
L6704 2.2µ
C6726 22P(CH)
C6727 22P(CH)
C6701 0.01
X6703 16.93M
R6718 68K
C6728 0.01
C6729 330/6.3
C6730 680P(M)
C6731 47/6.3
C6732 0.0012(ST)
C6733 220/6.3
C6734 0.0012(ST)
C6735 100/6.3
C6736 47/6.3
C6737 680P(M)
C6742 10/16
C6743 10/16
R6723 10K
R6724 10K
R6725 4.7K
R6726 4.7K
C6744 47/16
R6736 47K
R6727 1K
R6728 27K
R6729 8.2K
R6737 10K
R6730 1K
R6731 1K
R6732 27K
R6733 8.2K
R6734 1K
R6738 10K
C6748 3.3/25
C6747 3.3/25
C6746 3.3/25
C6745 3.3/25
VOLTAGE : NICAM EE MODE
8
9
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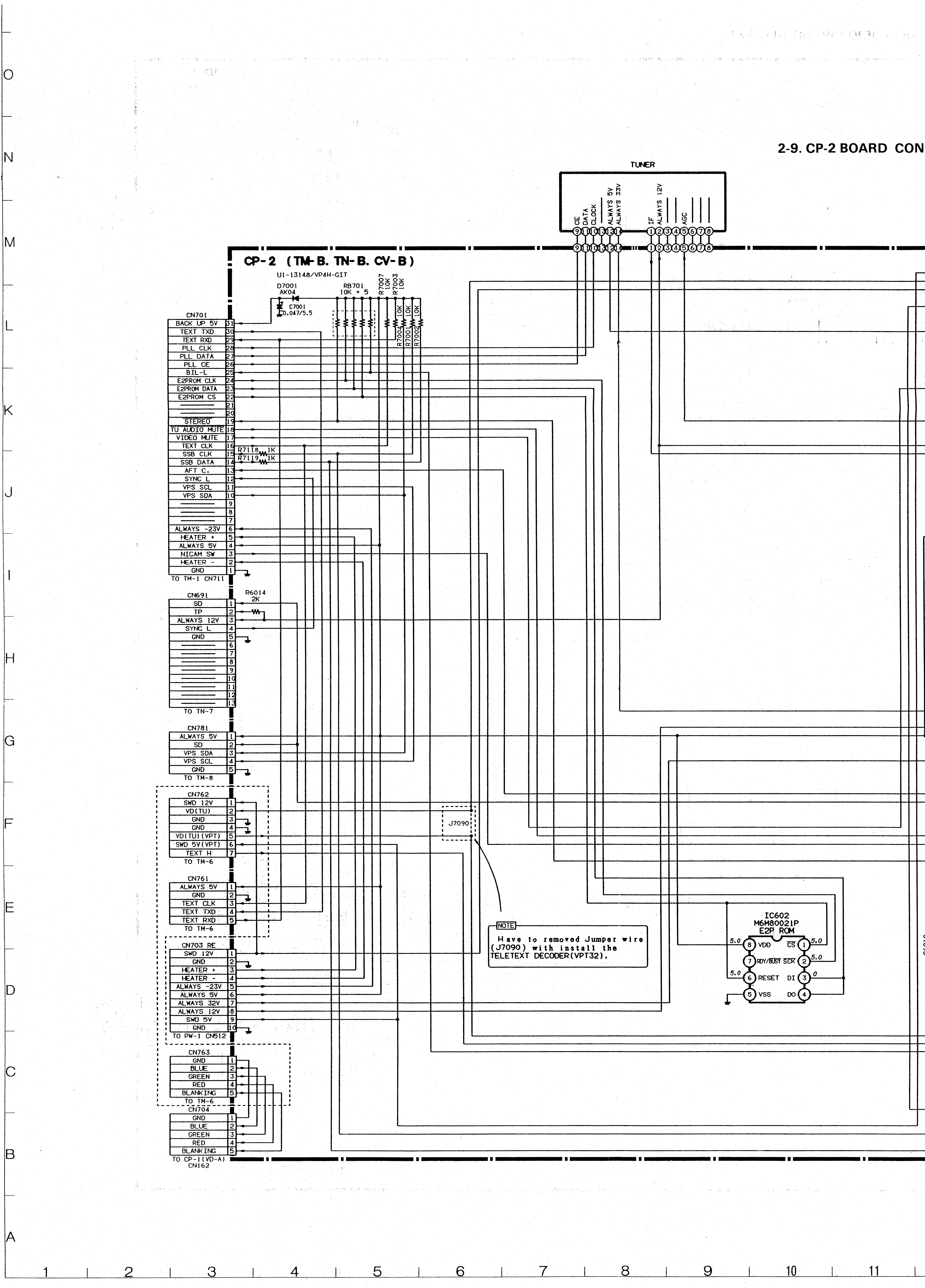
22
23

ITT V06362

2-9. CP-2 BOARD CON


CP-2 (TM-B. TN-B. CV-B)
U1-13148/VP4H-GIT
D7001
AK04
C7001
0.047/5.5
RB701
10K × 5
R7007 10K
R7003 10K
R7004 10K
R7001 10K
R7002 10K
R7118 1K
R7119 1K
R6014 2K
TUNER
CE
DATA
CLOCK
ALWAYS 5V
ALWAYS 33V
IF
ALWAYS 12V
AGC
CN701
BACK UP 5V
TEXT TXD
TEXT RXD
PLL CLK
PLL DATA
PLL CE
BIL-L
E2PROM CLK
E2PROM DATA
E2PROM CS
STEREO
TU AUDIO MUTE
VIDEO MUTE
TEXT CLK
SSB CLK
SSB DATA
AFT C.
SYNC L
VPS SCL
VPS SDA
ALWAYS -23V
HEATER +
ALWAYS 5V
NICAM SW
HEATER -
GND
TO TM-1 CN711
CN691
SD
TP
ALWAYS 12V
SYNC L
GND
TO TN-7
CN781
ALWAYS 5V
SD
VPS SDA
VPS SCL
GND
TO TM-8
CN762
SWD 12V
VD(TU)
GND
GND
VD(TU)(VPT)
SWD 5V(VPT)
TEXT H
TO TM-6
CN761
ALWAYS 5V
GND
TEXT CLK
TEXT TXD
TEXT RXD
TO TM-6
CN703 RE
SWD 12V
GND
HEATER +
HEATER -
ALWAYS -23V
ALWAYS 5V
ALWAYS 32V
ALWAYS 12V
SWD 5V
GND
TO PW-1 CN512
CN763
GND
BLUE
GREEN
RED
BLANKING
TO TM-6
CN704
GND
BLUE
GREEN
RED
BLANKING
TO CP-1(VD-A)
CN162
J7090
IC602
M6M80021P
E2P ROM
VDD
RDY/BUSY
RESET
VSS
CS
SCK
DI
DO
5.0
0
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
1
2
3
4
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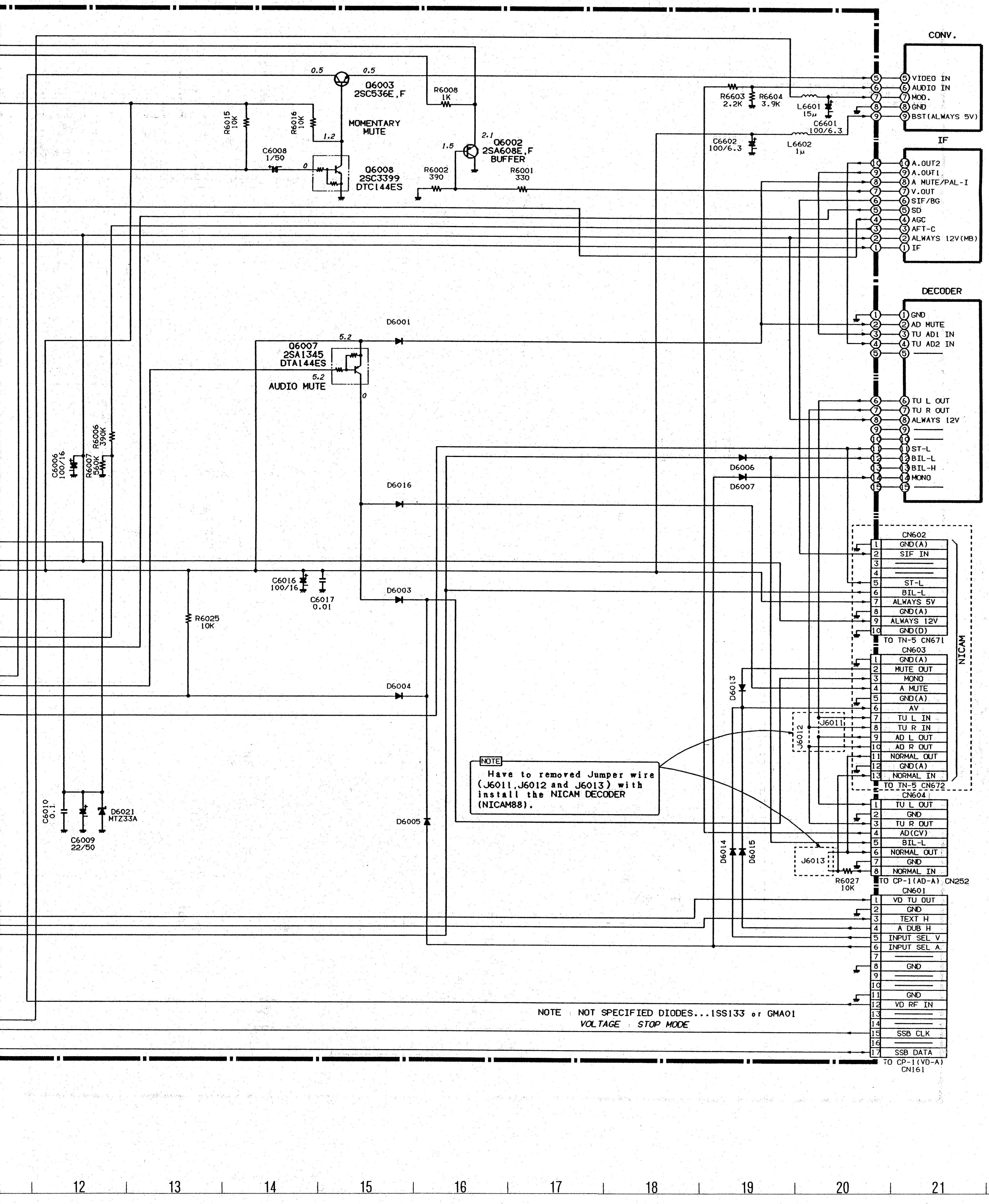
9
10
11

NOTE
Have to removed Jumper wire (J7090) with install the TELETEXT DECODER(VPT32).

CONNECTOR CIRCUIT DIAGRAM

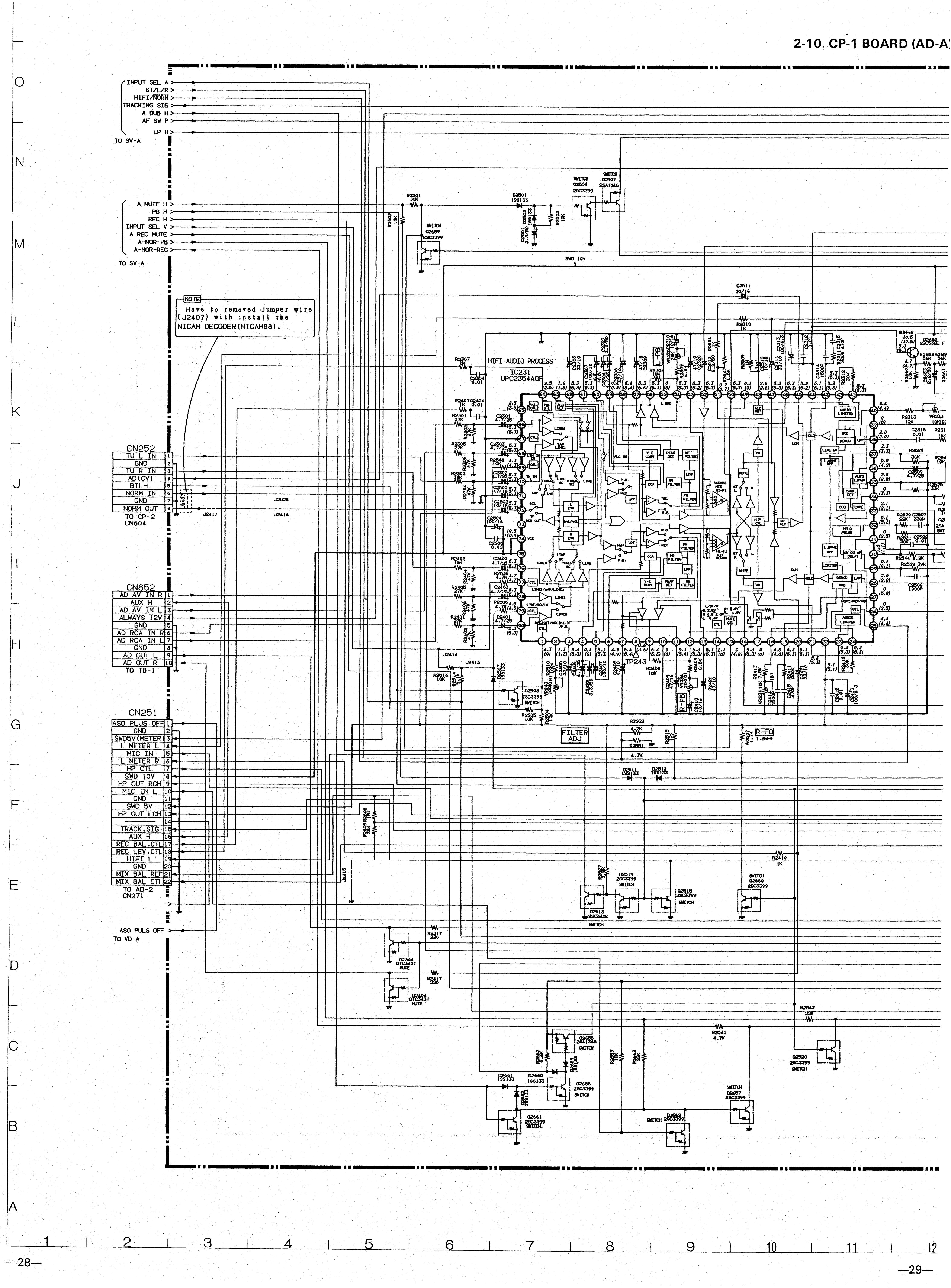


NOTE Have to remored Jumper wire (J6011,J6012 and J6013) with install the NICAM DECODER (NICAM88).

NOTE : NOT SPECIFIED DIODES...1SS133 or GMA01
VOLTAGE : STOP MODE

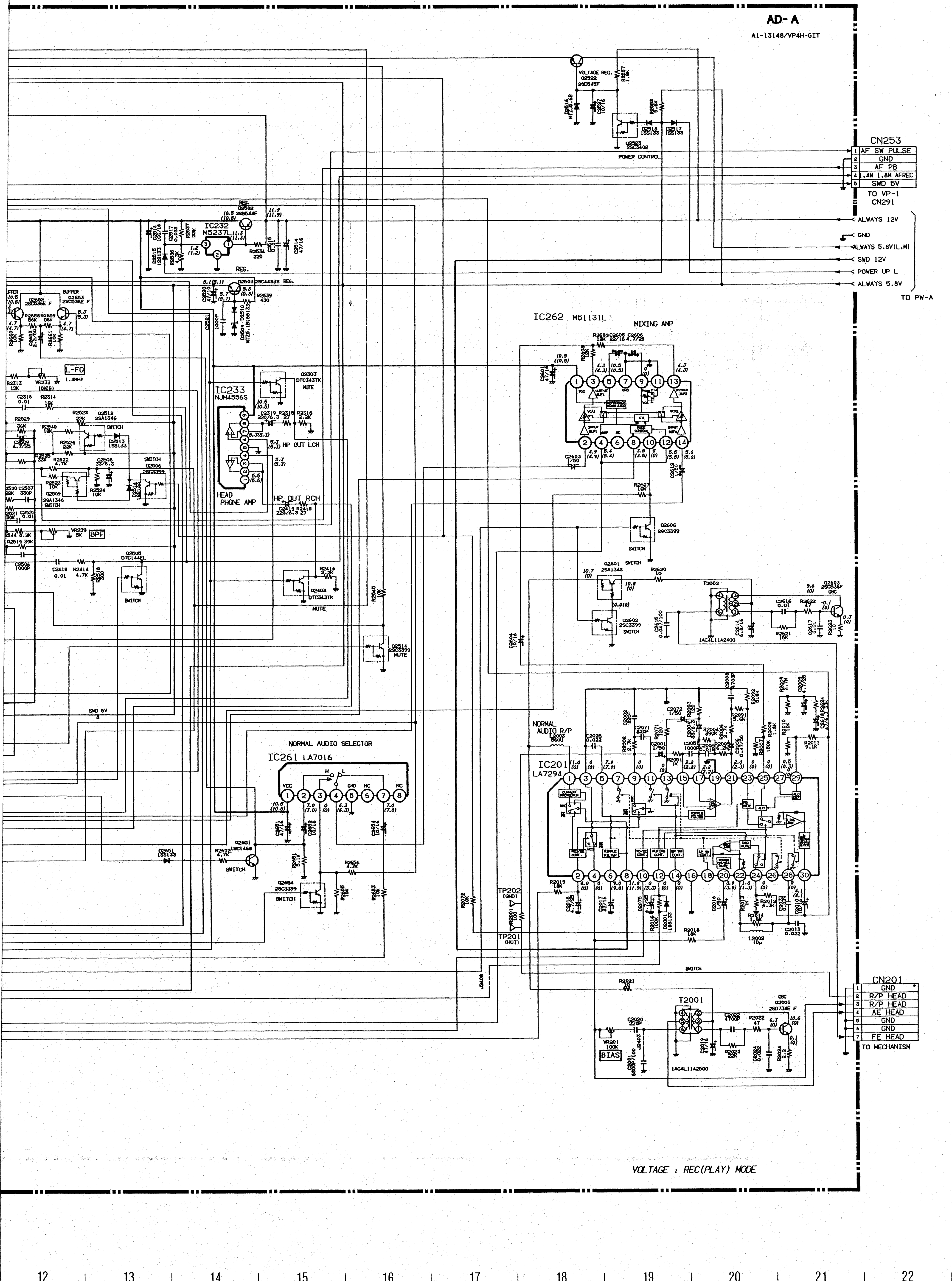
CONV.
VIDEO IN
AUDIO IN
MOD.
GND
BST(ALWAYS 5V)
IF
A.OUT2
A.OUT1
A MUTE/PAL-I
V.OUT
SIF/BG
SD
AGC
AFT-C
ALWAYS 12V(MB)
IF
DECODER
GND
AD MUTE
TU AD1 IN
TU AD2 IN
TU L OUT
TU R OUT
ALWAYS 12V
ST-L
BIL-L
BIL-H
MONO
CN602
GND(A)
SIF IN
ST-L
BIL-L
ALWAYS 5V
GND(A)
ALWAYS 12V
GND(D)
TO TN-5 CN671
CN603
GND(A)
MUTE OUT
MONO
A MUTE
GND(A)
AV
TU L IN
TU R IN
AD L OUT
AD R OUT
NORMAL OUT
GND(A)
NORMAL IN
TO TN-5 CN672
NICAM
CN604
TU L OUT
GND
TU R OUT
AD(CV)
BIL-L
NORMAL OUT
GND
NORMAL IN
TO CP-1(AD-A) CN252
CN601
VD TU OUT
GND
TEXT H
A DUB H
INPUT SEL V
INPUT SEL A
GND
GND
VD RF IN
SSB CLK
SSB DATA
TO CP-1(VD-A) CN161
Q6003 2SC536E,F
MOMENTARY MUTE
Q6008 2SC3399 DTC144ES
Q6002 2SA608E,F BUFFER
Q6007 2SA1345 DTA144ES
AUDIO MUTE
R6015 10K
R6016 10K
R6008 1K
R6002 390
R6001 330
C6008 1/50
R6603 2.2K
R6604 3.9K
L6601 15μ
C6601 100/6.3
C6602 100/6.3
L6602 1μ
C6006 100/16
R6007 560K
R6006 390K
C6016 100/16
C6017 0.01
R6025 10K
C6010 0.1
C6009 22/50
D6021 MTZ33A
D6001
D6016
D6003
D6004
D6005
D6006
D6007
D6013
D6014
D6015
J6011
J6012
J6013
R6027 10K
0.5
0.5
1.2
0
1.5
2.1
5.2
5.2
0
12
13
14
15
16
17
18
19
20
21
22
23

2-10. CP-1 BOARD (AD-A

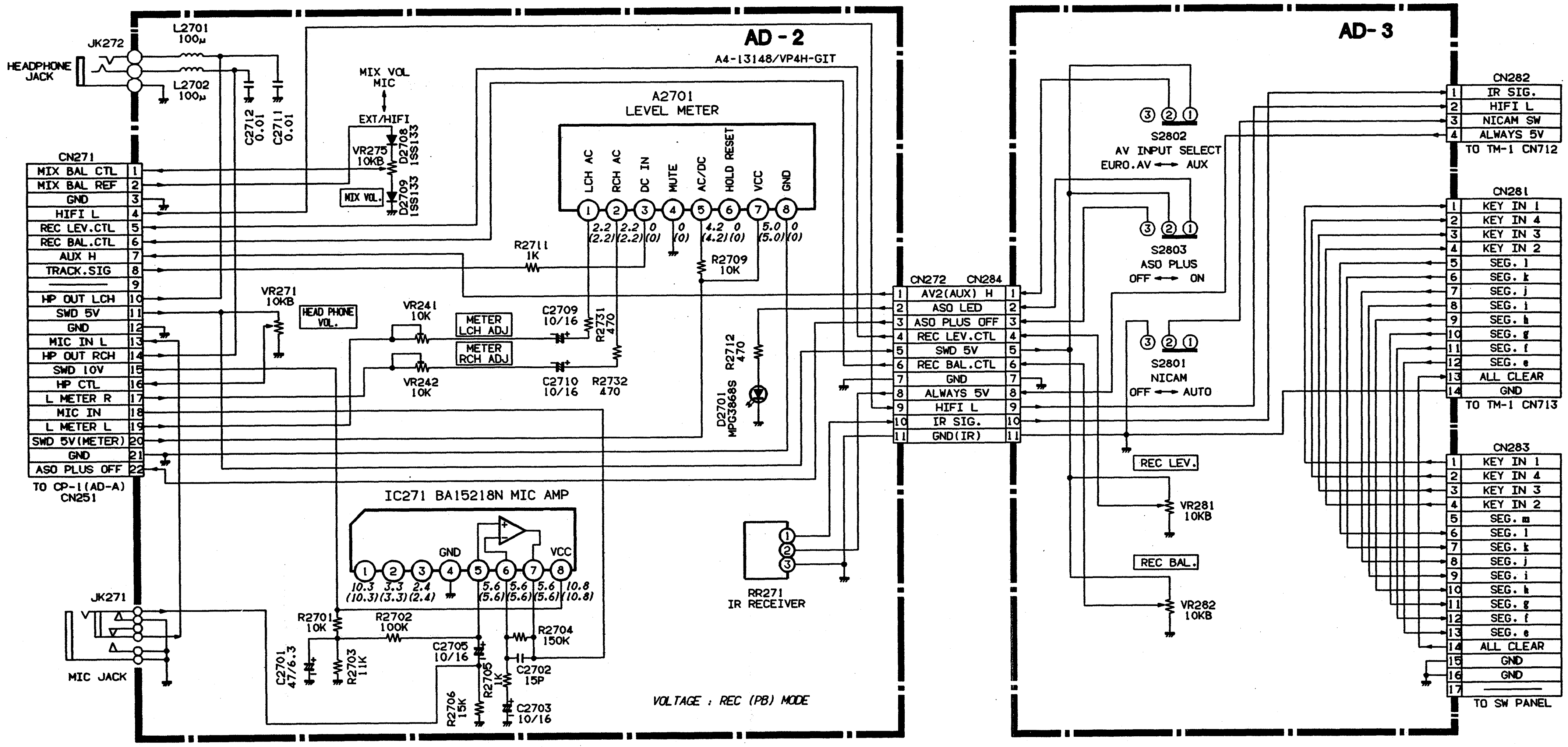

INPUT SEL A
ST/L/R
HIFI/NORM
TRACKING SIG
A DUB H
AF SW P
LP H
TO SV-A
A MUTE H
PB H
REC H
INPUT SEL V
A REC MUTE
A-NOR-PB
A-NOR-REC
TO SV-A
NOTE
CN252
TU L IN
GND
TU R IN
AD(CV)
BIL-L
NORM IN
GND
NORM OUT
TO CP-2
CN604
J2407
J2417
J2026
J2416
CN852
AD AV IN R
AUX H
AD AV IN L
ALWAYS 12V
GND
AD RCA IN R
AD RCA IN L
GND
AD OUT L
AD OUT R
TO TB-1
CN251
ASO PLUS OFF
GND
SWD5V(METER)
L METER L
MIC IN
L METER R
HP CTL
SWD 10V
HP OUT RCH
MIC IN L
GND
SWD 5V
HP OUT LCH
TRACK.SIG
AUX H
REC BAL.CTL
REC LEV.CTL
HIFI L
GND
MIX BAL REF
MIX BAL CTL
TO AD-2
CN271
ASO PULS OFF
TO VD-A
HIFI-AUDIO PROCESS
IC231
UPC2354AGF
TP243
FILTER ADJ
R-PB
L-PB
R-FO
SWD 10V
BUFFER
Q2504 2SC3399 SWITCH
Q2507 2SA1346 SWITCH
Q2659 2SC3399 SWITCH
Q2508 2SC3399 SWITCH
Q2304 DTC343T MUTE
Q2404 DTC343T MUTE
Q2519 2SC3399 SWITCH
Q2518 2SC3402 SWITCH
Q2515 2SC3399 SWITCH
Q2660 2SC3399 SWITCH
Q2658 2SA1346 SWITCH
Q2656 2SC3399 SWITCH
Q2661 2SC3399 SWITCH
Q2662 2SC3399 SWITCH
Q2657 2SC3399 SWITCH
Q2520 2SC3399 SWITCH
D2501 1SS133
D2502 1SS133
D2507 1SS133
D2511 1SS133
D2512 1SS133
D2640 1SS133
D2641 1SS133
D2642 1SS133
D2659 1SS133
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
1
2
3
4
5
6
7
8
9
10
11
12

NOTE
Have to removed Jumper wire (J2407) with install the NICAM DECODER(NICAM88).

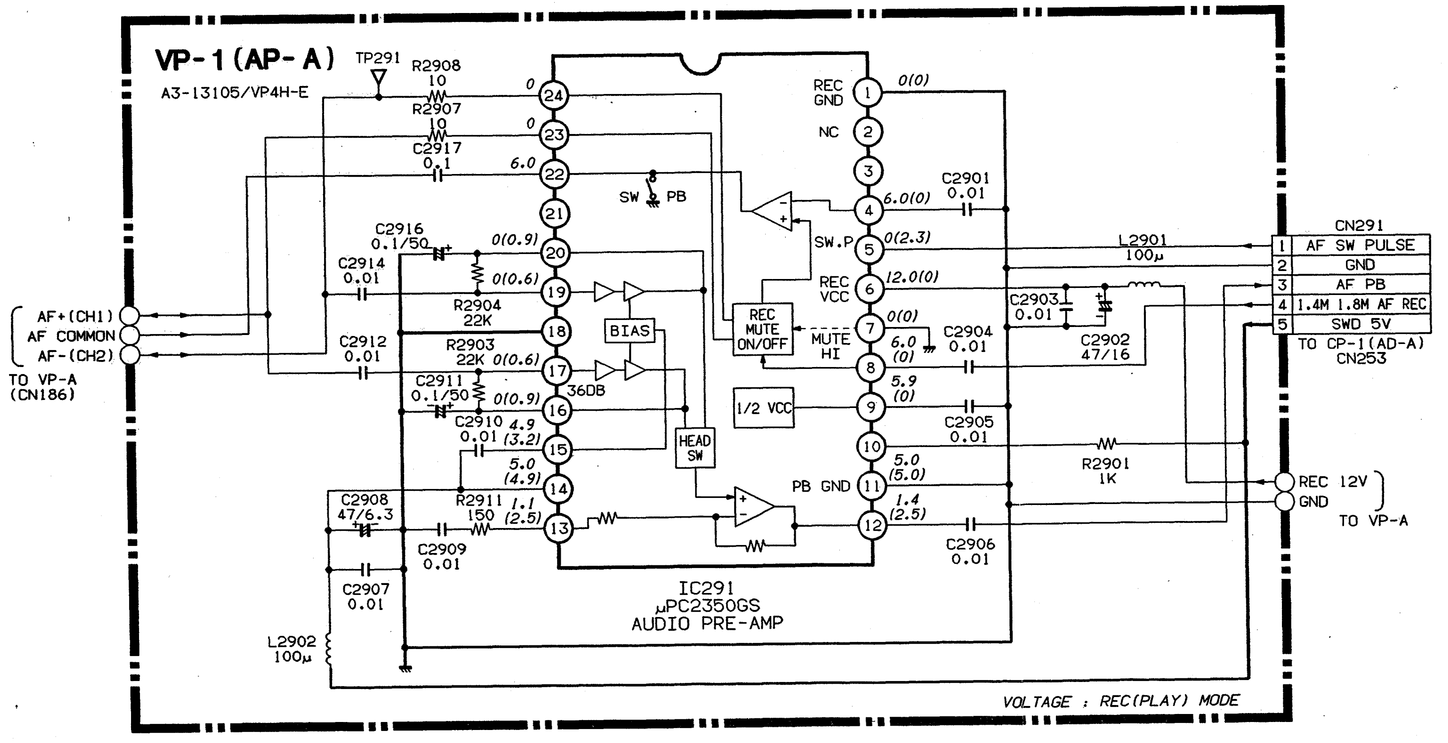
(AD-A) AUDIO CIRCUIT DIAGRAM


AD-A
A1-13148/VP4H-GIT
VOLTAGE REG. Q2522 2SD545F
POWER CONTROL Q2523 2SC3402
CN253
1 AF SW PULSE
2 GND
3 AF PB
4 .4M 1.8M AFREC
5 SWD 5V
TO VP-1 CN291
ALWAYS 12V
GND
ALWAYS 5.8V(L.M)
SWD 12V
POWER UP L
ALWAYS 5.8V
TO PW-A
IC232 M5237L
REG. Q2502 2SB544F
Q2503 2SC4483S REG.
BUFFER Q2652 2SC536E F
BUFFER Q2653 2SC536E F
L-FO
BPF
IC233 NJM4556S
HEAD PHONE AMP
HP OUT LCH
HP OUT RCH
Q2303 DTC343TK MUTE
Q2403 DTC343TK MUTE
Q2614 2SC3399 MUTE
Q2512 2SA1346 SWITCH
Q2506 2SC3399 SWITCH
Q2509 2SA1346 SWITCH
Q2508 DTC144EL SWITCH
SWD 5V
NORMAL AUDIO SELECTOR
IC261 LA7016
Q2661 2SC1468 SWITCH
Q2654 2SC3399 SWITCH
IC262 M51131L
MIXING AMP
Q2606 2SC3399 SWITCH
Q2601 2SA1348 SWITCH
Q2602 2SC3399 SWITCH
T2002
Q2603 2SC536F OSC
NORMAL AUDIO R/P
IC201 LA7294
TP202 (GND)
TP201 (HOT)
J2406
SWITCH
T2001
OSC Q2001 2SD734E F
BIAS
VR201 100K
CN201
1 GND
2 R/P HEAD
3 R/P HEAD
4 AE HEAD
5 GND
6 GND
7 FE HEAD
TO MECHANISM
VOLTAGE : REC(PLAY) MODE
12
13
14
15
16
17
18
19
20
21
22
23

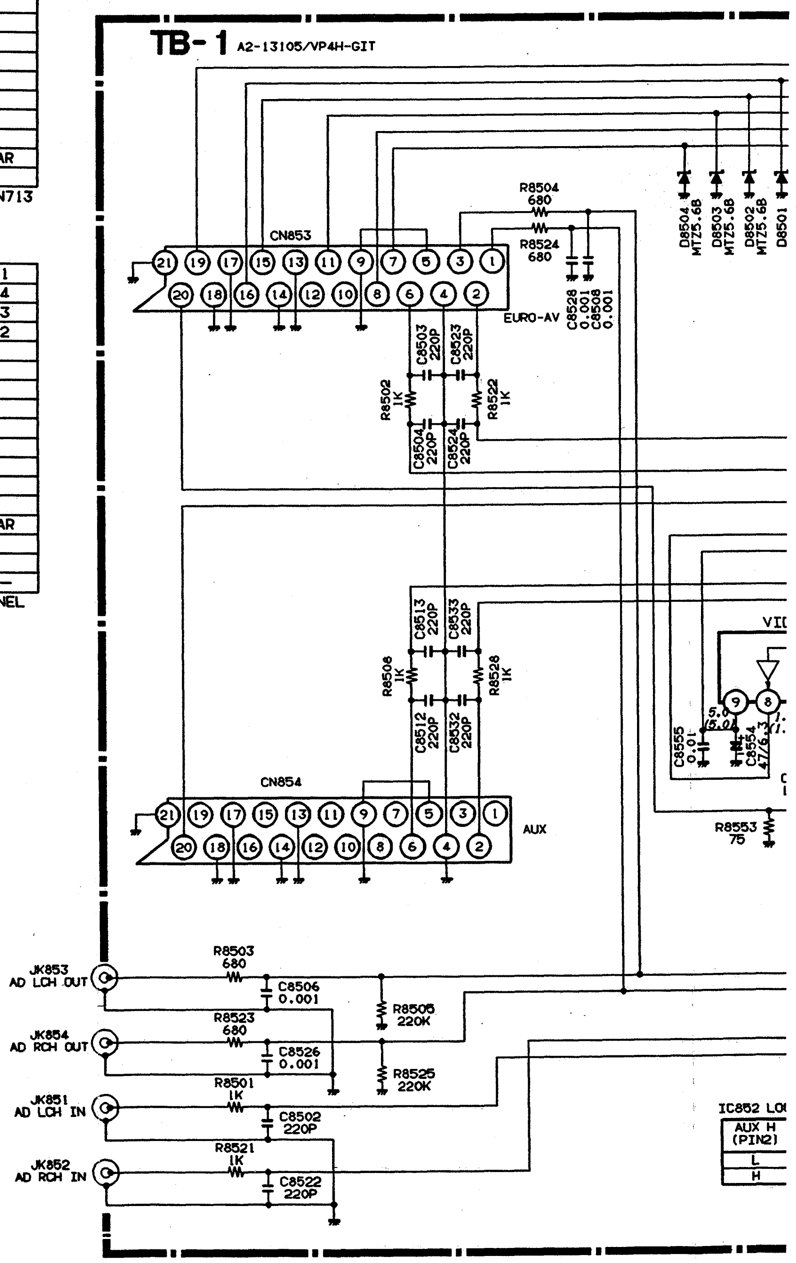
2-11. AD-2, 3 BOARD AUDIO LEVEL METER & OPERATION CIRCUIT DIAGRAM


AD-2
A4-13148/VP4H-GIT
AD-3
JK272
HEADPHONE JACK
L2701 100μ
L2702 100μ
C2712 0.01
C2711 0.01
MIX VOL MIC
EXT/HIFI
VR275 10KB
D2708 1SS133
D2709 1SS133
MIX VOL.
A2701 LEVEL METER
LCH AC
RCH AC
DC IN
MUTE
AC/DC
HOLD RESET
VCC
GND
CN271
MIX BAL CTL
MIX BAL REF
GND
HIFI L
REC LEV.CTL
REC BAL.CTL
AUX H
TRACK.SIG
HP OUT LCH
SWD 5V
GND
MIC IN L
HP OUT RCH
SWD 10V
HP CTL
L METER R
MIC IN
L METER L
SWD 5V(METER)
GND
ASO PLUS OFF
TO CP-1(AD-A) CN251
R2711 1K
R2709 10K
VR271 10KB
HEAD PHONE VOL.
VR241 10K
VR242 10K
METER LCH ADJ
METER RCH ADJ
C2709 10/16
C2710 10/16
R2731 470
R2732 470
R2712 470
D2701 MPG3868S
CN272 CN284
AV2(AUX) H
ASO LED
ASO PLUS OFF
REC LEV.CTL
SWD 5V
REC BAL.CTL
GND
ALWAYS 5V
HIFI L
IR SIG.
GND(IR)
IC271 BA15218N MIC AMP
GND
VCC
RR271 IR RECEIVER
JK271
MIC JACK
R2701 10K
R2702 100K
R2703 1K
C2701 47/6.3
C2705 10/16
R2704 150K
C2702 15P
R2705 1K
R2706 15K
C2703 10/16
VOLTAGE : REC (PB) MODE
S2802 AV INPUT SELECT
EURO.AV ←→ AUX
S2803 ASO PLUS
OFF ←→ ON
S2801 NICAM
OFF ←→ AUTO
REC LEV.
VR281 10KB
REC BAL.
VR282 10KB
CN282
IR SIG.
HIFI L
NICAM SW
ALWAYS 5V
TO TM-1 CN712
CN281
KEY IN 1
KEY IN 4
KEY IN 3
KEY IN 2
SEG. l
SEG. k
SEG. j
SEG. i
SEG. h
SEG. g
SEG. f
SEG. e
ALL CLEAR
GND
TO TM-1 CN713
CN283
KEY IN 1
KEY IN 4
KEY IN 3
KEY IN 2
SEG. m
SEG. l
SEG. k
SEG. j
SEG. i
SEG. h
SEG. g
SEG. f
SEG. e
ALL CLEAR
GND
GND
TO SW PANEL

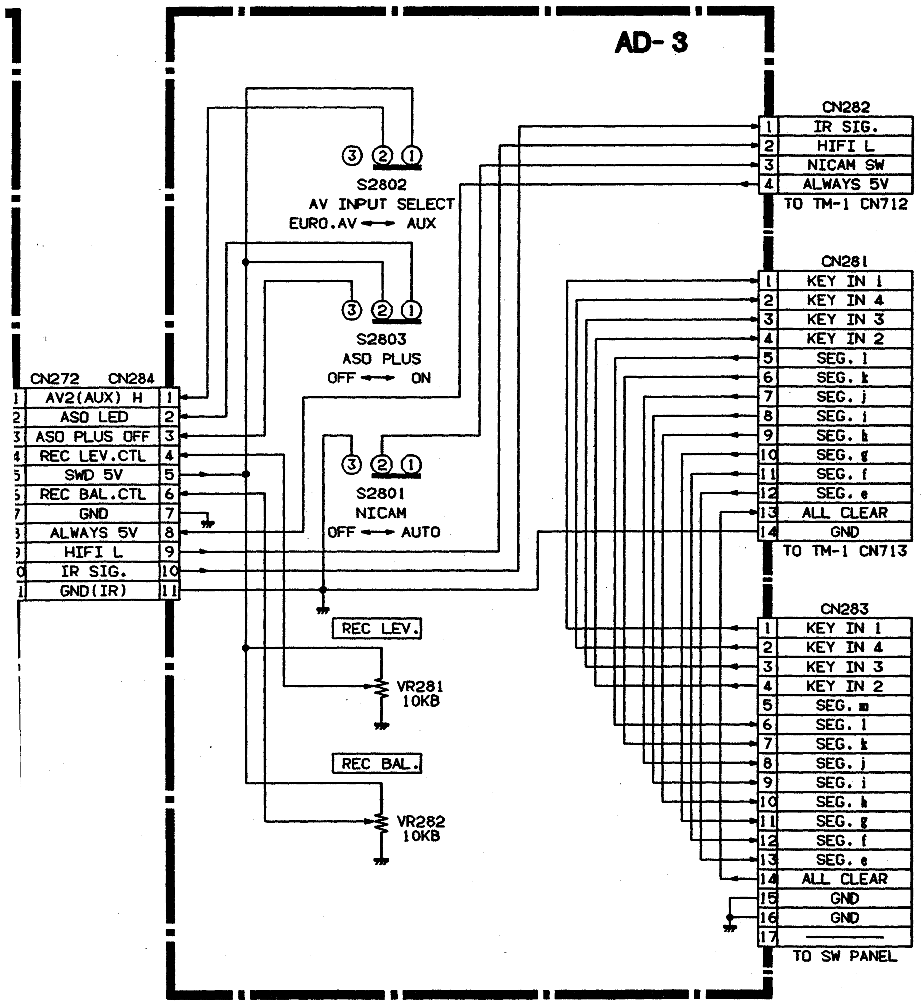
2-12. VP-1 BOARD (AP-A) AUDIO PRE-AMP CIRCUIT DIAGRAM


VP-1 (AP-A)
A3-13105/VP4H-E
TP291
R2908 10
R2907 10
C2917 0.1
SW PB
C2916 0.1/50
C2914 0.01
R2904 22K
R2903 22K
C2912 0.01
BIAS
C2911 0.1/50
36DB
C2910 0.01
C2908 47/6.3
R2911 150
C2909 0.01
C2907 0.01
L2902 100μ
AF+(CH1)
AF COMMON
AF-(CH2)
TO VP-A (CN186)
REC GND
NC
SW.P
REC VCC
REC MUTE ON/OFF
MUTE HI
1/2 VCC
HEAD SW
PB GND
C2901 0.01
C2903 0.01
C2904 0.01
C2902 47/16
C2905 0.01
C2906 0.01
L2901 100μ
R2901 1K
CN291
AF SW PULSE
GND
AF PB
1.4M 1.8M AF REC
SWD 5V
TO CP-1(AD-A) CN253
REC 12V
GND
TO VP-A
IC291 μPC2350GS AUDIO PRE-AMP
VOLTAGE : REC(PLAY) MODE

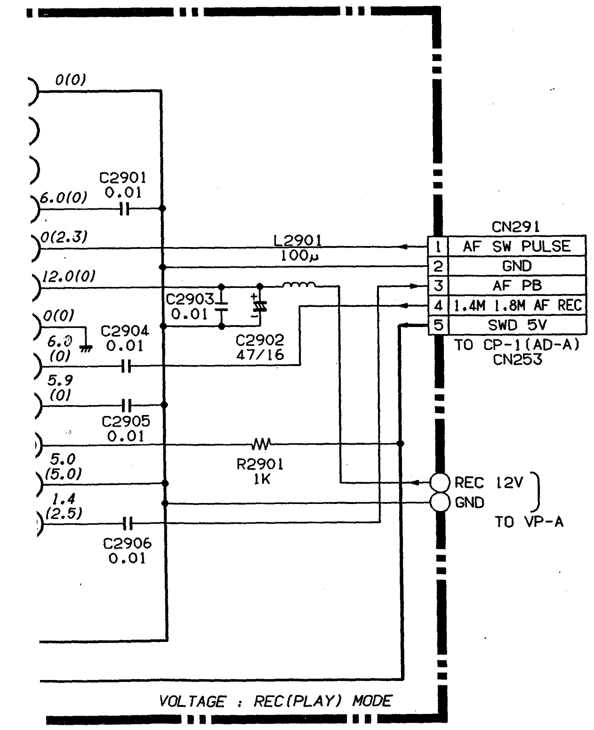
2-13. TB-1 BOARD TERM


TB-1
A2-13105/VP4H-GIT
CN853
EURO-AV
CN854
AUX
R8504 680
R8524 680
C8528 0.001
C8508 0.001
D8504 MTZ5.6B
D8503 MTZ5.6B
D8502 MTZ5.6B
D8501
R8502 1K
R8522 1K
C8503 220P
C8523 220P
C8504 220P
C8524 220P
C8513 220P
C8533 220P
C8512 220P
C8532 220P
R8506 1K
R8526 1K
C8555 0.01
C8554 47/6.3
R8553 75
JK853 AD LCH OUT
JK854 AD RCH OUT
JK851 AD LCH IN
JK852 AD RCH IN
R8503 680
C8506 0.001
R8523 680
C8526 0.001
R8505 220K
R8525 220K
R8501 1K
C8502 220P
R8521 1K
C8522 220P
IC852 LO
AUX H (PIN2)
L
H

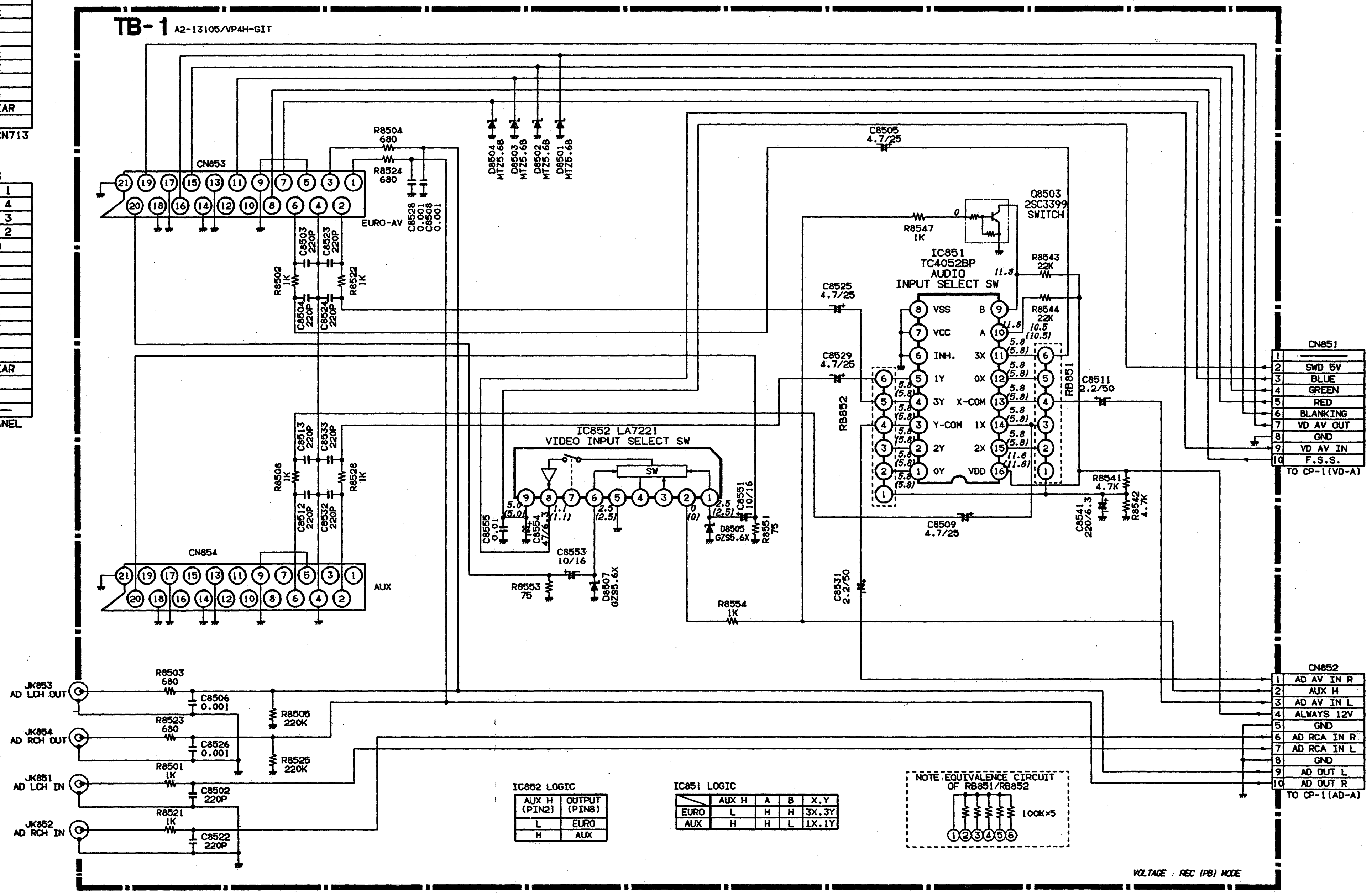
ERATION CIRCUIT DIAGRAM


AD-3
S2802
AV INPUT SELECT
EURO.AV ←→ AUX
S2803
ASO PLUS
OFF ←→ ON
S2801
NICAM
OFF ←→ AUTO
REC LEV.
VR281
10KB
REC BAL.
VR282
10KB
CN272 CN284
1 AV2(AUX) H
2 ASO LED
3 ASO PLUS OFF
4 REC LEV.CTL
5 SWD 5V
6 REC BAL.CTL
7 GND
8 ALWAYS 5V
9 HIFI L
10 IR SIG.
11 GND(IR)
CN282
1 IR SIG.
2 HIFI L
3 NICAM SW
4 ALWAYS 5V
TO TM-1 CN712
CN281
1 KEY IN 1
2 KEY IN 4
3 KEY IN 3
4 KEY IN 2
5 SEG. l
6 SEG. k
7 SEG. j
8 SEG. i
9 SEG. h
10 SEG. g
11 SEG. f
12 SEG. e
13 ALL CLEAR
14 GND
TO TM-1 CN713
CN283
1 KEY IN 1
2 KEY IN 4
3 KEY IN 3
4 KEY IN 2
5 SEG. m
6 SEG. l
7 SEG. k
8 SEG. j
9 SEG. i
10 SEG. h
11 SEG. g
12 SEG. f
13 SEG. e
14 ALL CLEAR
15 GND
16 GND
17 ———
TO SW PANEL

CIRCUIT DIAGRAM


0(0)
C2901
0.01
6.0(0)
0(2.3)
L2901
100μ
12.0(0)
C2903
0.01
0(0)
C2904
0.01
6.0
(0)
C2902
47/16
5.9
(0)
C2905
0.01
5.0
(5.0)
R2901
1K
1.4
(2.5)
C2906
0.01
CN291
1 AF SW PULSE
2 GND
3 AF PB
4 1.4M 1.8M AF REC
5 SWD 5V
TO CP-1(AD-A)
CN253
REC 12V
GND
TO VP-A
VOLTAGE : REC(PLAY) MODE

2-13. TB-1 BOARD TERMINAL & INPUT SELECT CIRCUIT DIAGRAM


TB-1 A2-13105/VP4H-GIT
CN853
EURO-AV
CN854
AUX
R8504
680
R8524
680
C8528
0.001
C8508
0.001
D8504 MTZ5.6B
D8503 MTZ5.6B
D8502 MTZ5.6B
D8501 MTZ5.6B
C8503 220P
C8523 220P
R8502 1K
R8522 1K
C8504 220P
C8524 220P
C8513 220P
C8533 220P
R8508 1K
R8528 1K
C8512 220P
C8532 220P
C8505
4.7/25
Q8503
2SC3399
SWITCH
R8547
1K
IC851
TC4052BP
AUDIO
INPUT SELECT SW
R8543
22K
R8544
22K
C8525
4.7/25
C8529
4.7/25
RB852
RB851
C8511
2.2/50
VSS
VCC
INH.
1Y
3Y
Y-COM
2Y
0Y
B
A
3X
0X
X-COM
1X
2X
VDD
IC852 LA7221
VIDEO INPUT SELECT SW
SW
C8555
0.01
C8554
47/6
C8553
10/16
C8551
10/16
D8505
GZS5.6X
R8551
75
R8553
75
D8507
GZS5.6X
C8509
4.7/25
C8541
220/6.3
R8541
4.7K
R8542
4.7K
C8531
2.2/50
R8554
1K
CN851
1 ———
2 SWD 5V
3 BLUE
4 GREEN
5 RED
6 BLANKING
7 VD AV OUT
8 GND
9 VD AV IN
10 F.S.S.
TO CP-1(VD-A)
JK853
AD LCH OUT
JK854
AD RCH OUT
JK851
AD LCH IN
JK852
AD RCH IN
R8503
680
C8506
0.001
R8523
680
C8526
0.001
R8506
220K
R8525
220K
R8501
1K
C8502
220P
R8521
1K
C8522
220P
CN852
1 AD AV IN R
2 AUX H
3 AD AV IN L
4 ALWAYS 12V
5 GND
6 AD RCA IN R
7 AD RCA IN L
8 GND
9 AD OUT L
10 AD OUT R
TO CP-1(AD-A)
NOTE EQUIVALENCE CIRCUIT
OF RB851/RB852
100K×5
VOLTAGE : REC (PB) MODE

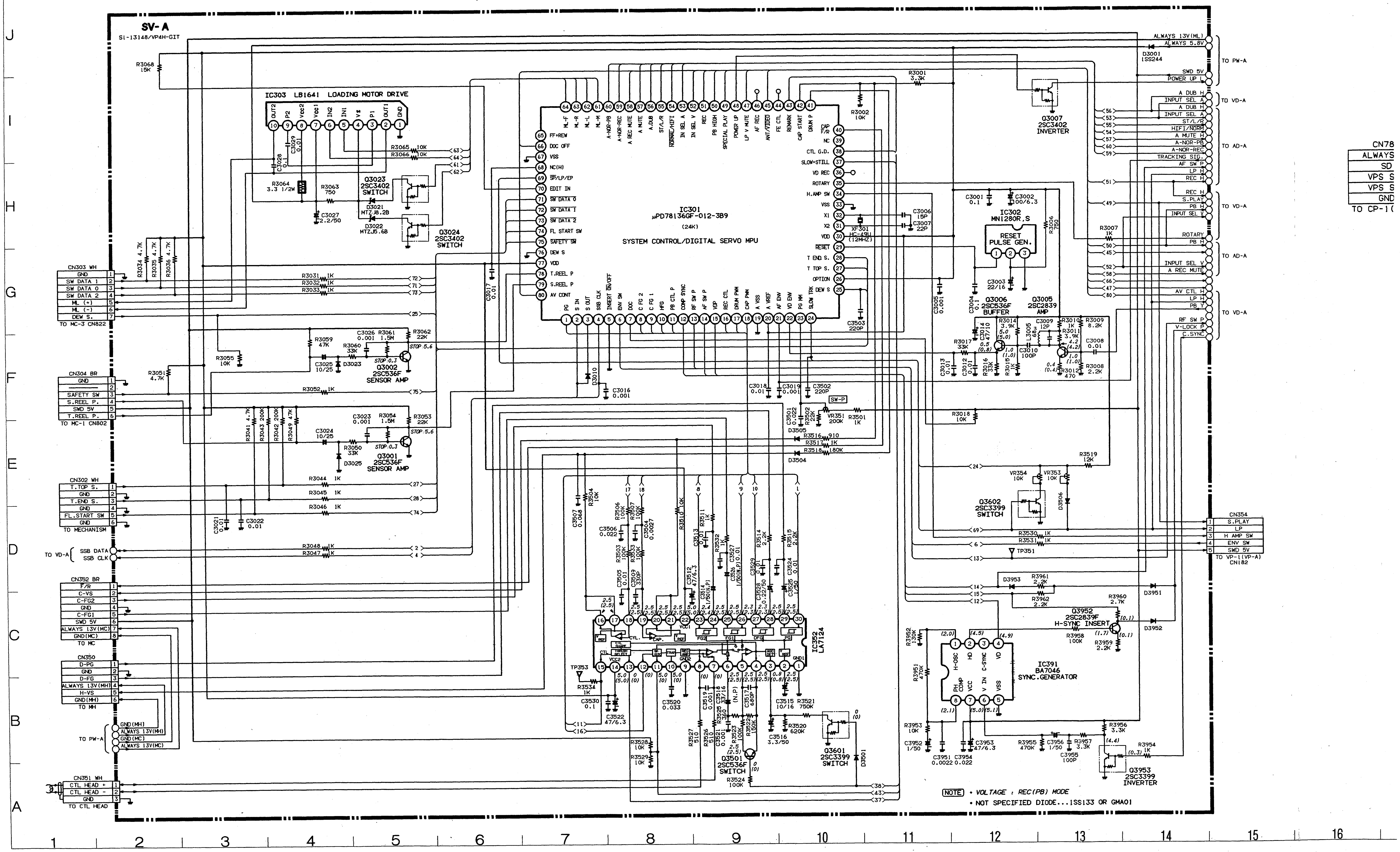
IC852 LOGIC

AUX H (PIN2)	OUTPUT (PIN8)
L	EURO
H	AUX

IC851 LOGIC

	AUX H	A	B	X.Y
EURO	L	H	H	3X.3Y
AUX	H	H	L	1X.1Y

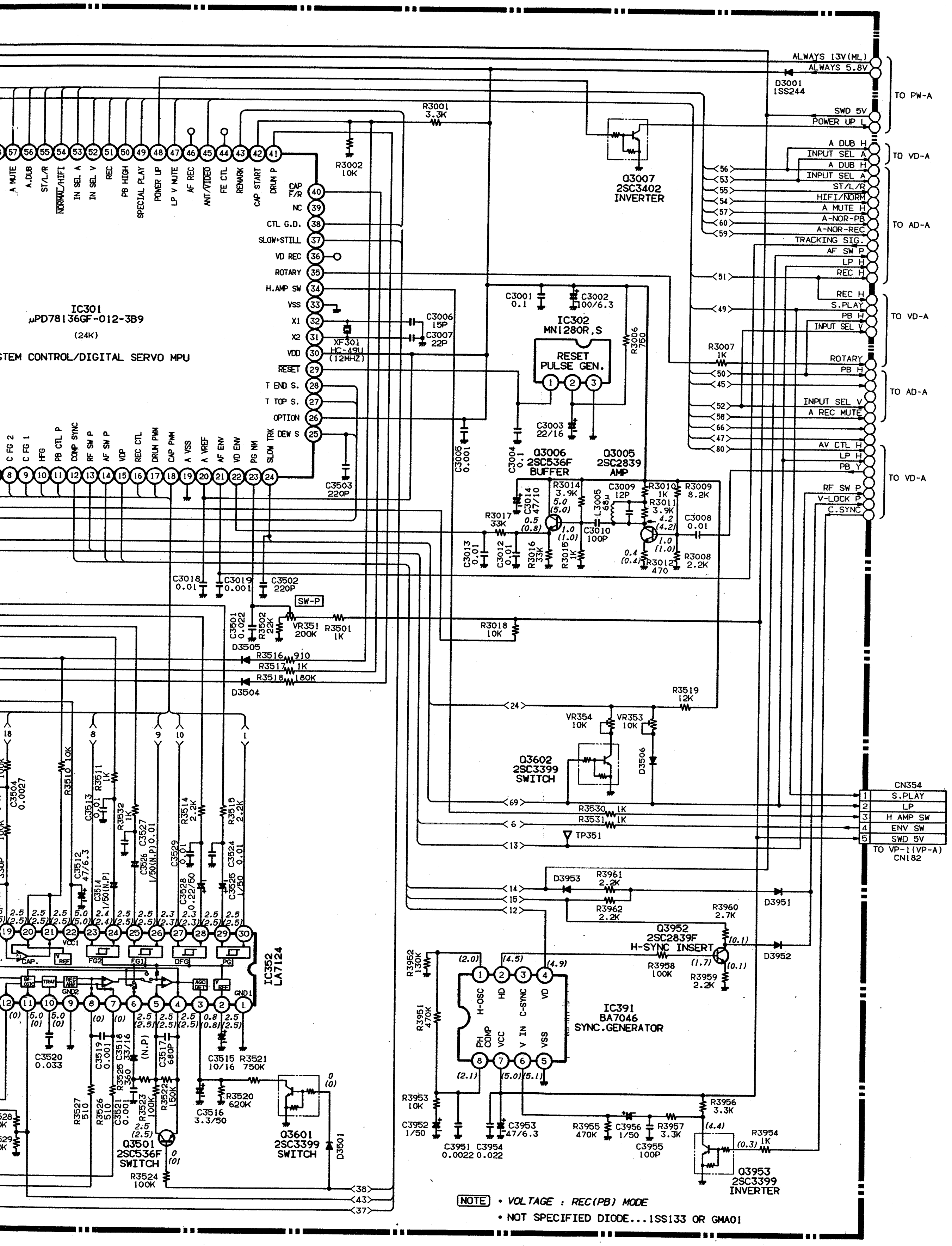
2-14. CP-1 BOARD (SV-A) SYSTEM CONTROL & SERVO CIRCUIT DIAGRAM



SV-A
S1-13148/VP4H-GIT
IC303 LB1641 LOADING MOTOR DRIVE
OUT2 P2 Vcc2 Vcc1 IN2 IN1 Vz P1 OUT1 GND
IC301
μPD78136GF-012-3B9
(24K)
SYSTEM CONTROL/DIGITAL SERVO MPU
FF+REW
DOC OFF
VSS
NC(H)
SP/LP/EP
EDIT IN
SW DATA 0
SW DATA 1
SW DATA 2
FL START SW
SAFETY SW
DEW S
VDD
T.REEL P
S.REEL P
AV CONT
ML-F
ML-R
ML-L
ML-H
A-NOR-PB
A-NOR-REC
A REC MUTE
A MUTE
A.DUB
ST/L/R
NORMAL/HIFI
IN SEL A
IN SEL V
REC
PB HIGH
SPECIAL PLAY
POWER UP
LP V MUTE
AF REC
ANT/VIDEO
FE CTL
REMARK
CAP START
DRUM P
CAP F/R
NC
CTL G.D.
SLOW+STILL
VD REC
ROTARY
H.AMP SW
VSS
X1
X2
VDD
RESET
T END S.
T TOP S.
OPTION
DEW S
XF301 HC-49U (12MHZ)
IC302 MN1280R.S
RESET PULSE GEN.
Q3007 2SC3402 INVERTER
Q3006 2SC536F BUFFER
Q3005 2SC2839 AMP
Q3023 2SC3402 SWITCH
Q3024 2SC3402 SWITCH
D3021 MTZJ8.2B
D3022 MTZJ5.6B
Q3002 2SC536F SENSOR AMP
Q3001 2SC536F SENSOR AMP
CN303 WH
GND
SW DATA 1
SW DATA 0
SW DATA 2
ML (+)
ML (-)
DEW S.
TO MC-3 CN822
CN304 BR
GND
SAFETY SW
S.REEL P.
SWD 5V
T.REEL P.
TO MC-1 CN802
CN302 WH
T.TOP S.
GND
T.END S.
GND
FL.START SW
GND
TO MECHANISM
TO VD-A
SSB DATA
SSB CLK
CN352 BR
F/R
C-VS
C-FG2
GND
C-FG1
SWD 5V
ALWAYS 13V(MC)
GND(MC)
TO MC
CN350
D-PG
GND
D-FG
ALWAYS 13V(MH)
H-VS
GND(MH)
TO MH
TO PW-A
GND(MH)
ALWAYS 13V(MH)
GND(MC)
ALWAYS 13V(MC)
CN351 WH
CTL HEAD +
CTL HEAD -
GND
TO CTL HEAD
IC352 LA7124
CYL.
CAP.
FG2
FG1
DFG
PG
Q3501 2SC536F SWITCH
Q3601 2SC3399 SWITCH
Q3602 2SC3399 SWITCH
SW-P
VR351 200K
VR354 10K
VR353 10K
TP351
TP353
IC391 BA7046 SYNC.GENERATOR
H-OSC
HD
C-SYNC
VD
PH COMP
VCC
V IN
VSS
Q3952 2SC2839F H-SYNC INSERT
Q3953 2SC3399 INVERTER
ALWAYS 13V(ML)
ALWAYS 5.8V
D3001 1SS244
SWD 5V
POWER UP L
TO PW-A
A DUB H
INPUT SEL A
A DUB H
INPUT SEL A
ST/L/R
HIFI/NORM
A MUTE H
A-NOR-PB
A-NOR-REC
TRACKING SIG.
AF SW P
LP H
REC H
REC H
S.PLAY
PB H
INPUT SEL V
ROTARY
PB H
INPUT SEL V
A REC MUTE
AV CTL H
LP H
PB Y
RF SW P
V-LOCK P
C.SYNC
TO VD-A
TO AD-A
TO VD-A
TO AD-A
TO VD-A
CN354
S.PLAY
LP
H AMP SW
ENV SW
SWD 5V
TO VP-1(VP-A) CN182
CN78
ALWAYS
SD
VPS S
VPS S
GND
TO CP-1
A B C D E F G H I J K
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

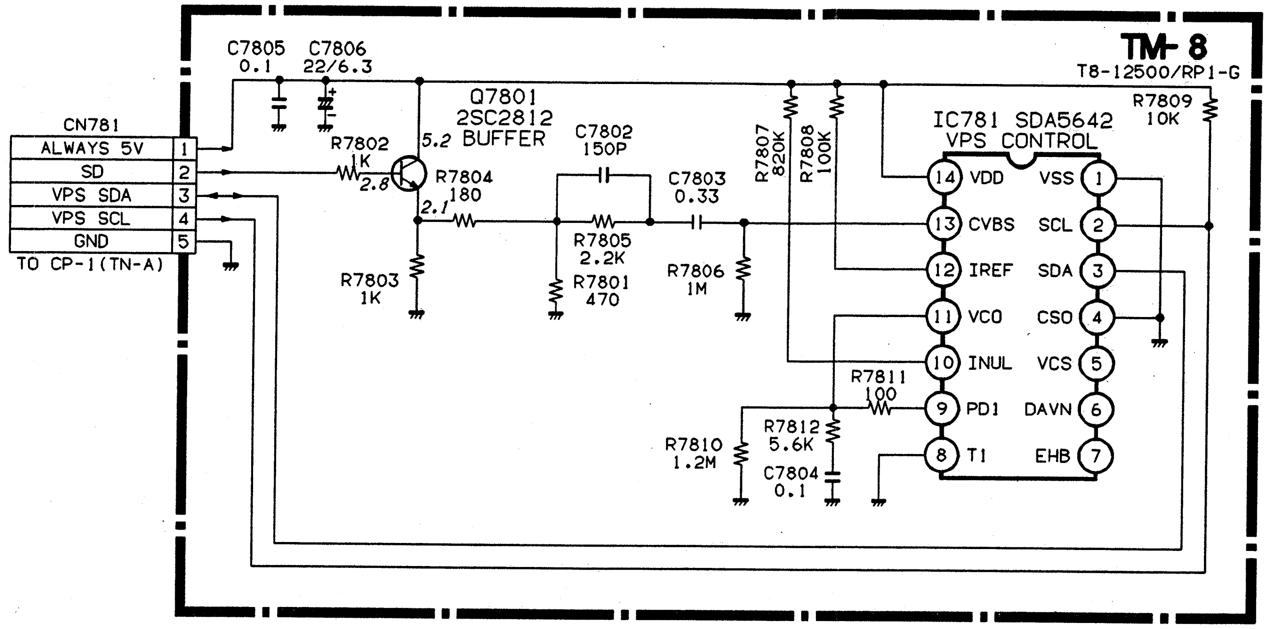
NOTE • VOLTAGE : REC(PB) MODE
• NOT SPECIFIED DIODE...1SS133 OR GMA01

EM CONTROL & SERVO CIRCUIT DIAGRAM

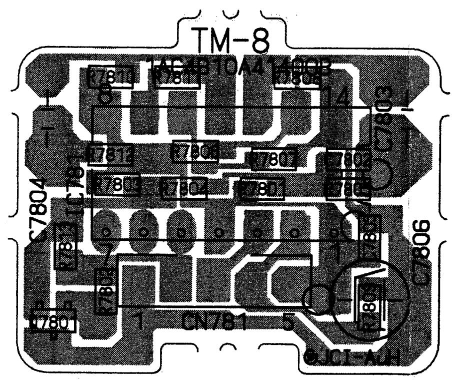

ALWAYS 13V(ML)
ALWAYS 5.8V
D3001 1SS244
TO PW-A
SWD 5V
POWER UP L
R3001 3.3K
R3002 10K
Q3007 2SC3402 INVERTER
TO VD-A
TO AD-A
A DUB H
INPUT SEL A
HIFI/NORM
A MUTE H
A-NOR-PB
A-NOR-REC
TRACKING SIG.
AF SW P
LP H
REC H
S.PLAY
PB H
INPUT SEL Y
ROTARY
INPUT SEL V
A REC MUTE
AV CTL H
LP H
PB Y
RF SW P
V-LOCK P
C.SYNC
IC301 μPD78136GF-012-3B9 (24K)
STEM CONTROL/DIGITAL SERVO MPU
XF301 HC-49U (12MHZ)
C3006 15P
C3007 22P
C3001 0.1
C3002 100/6.3
IC302 MN1280R,S
RESET PULSE GEN.
R3006 750
R3007 1K
C3003 22/16
C3004 0.1
C3005 0.001
Q3006 2SC536F BUFFER
Q3005 2SC2839 AMP
R3014 3.9K
C3014 47/10
R3017 33K
L3005 68μ
C3009 12P
C3010 100P
R3010 1K
R3011 3.9K
R3009 8.2K
C3008 0.01
R3008 2.2K
R3012 470
R3016 33K
R3015 1K
C3013 0.01
C3012 0.01
C3018 0.01
C3019 0.001
C3502 220P
C3503 220P
SW-P
VR351 200K
R3501 1K
R3018 10K
D3505
R3516 910
R3517 1K
R3518 180K
D3504
R3519 12K
VR354 10K
VR353 10K
Q3602 2SC3399 SWITCH
D3506
CN354
S.PLAY
LP
H AMP SW
ENV SW
SWD 5V
TO VP-1(VP-A) CN182
R3530 1K
R3531 1K
TP351
D3953
R3961 2.2K
R3962 2.2K
R3960 2.7K
D3951
D3952
Q3952 2SC2839F H-SYNC INSERT
R3958 100K
R3959 2.2K
IC391 BA7046 SYNC.GENERATOR
R3952 130K
R3951 470K
R3953 10K
C3952 1/50
C3951 0.0022
C3954 0.022
C3953 47/6.3
R3955 470K
C3956 1/50
R3957 3.3K
C3955 100P
R3956 3.3K
R3954 1K
Q3953 2SC3399 INVERTER
IC352 LA7124
C3520 0.033
C3515 10/16
R3521 750K
R3520 620K
C3516 3.3/50
Q3601 2SC3399 SWITCH
D3501
Q3501 2SC536F SWITCH
R3524 100K

NOTE • VOLTAGE : REC(PB) MODE
• NOT SPECIFIED DIODE...1SS133 OR GMA01

2-15. TM-8 BOARD VPS CIRCUIT DIAGRAM

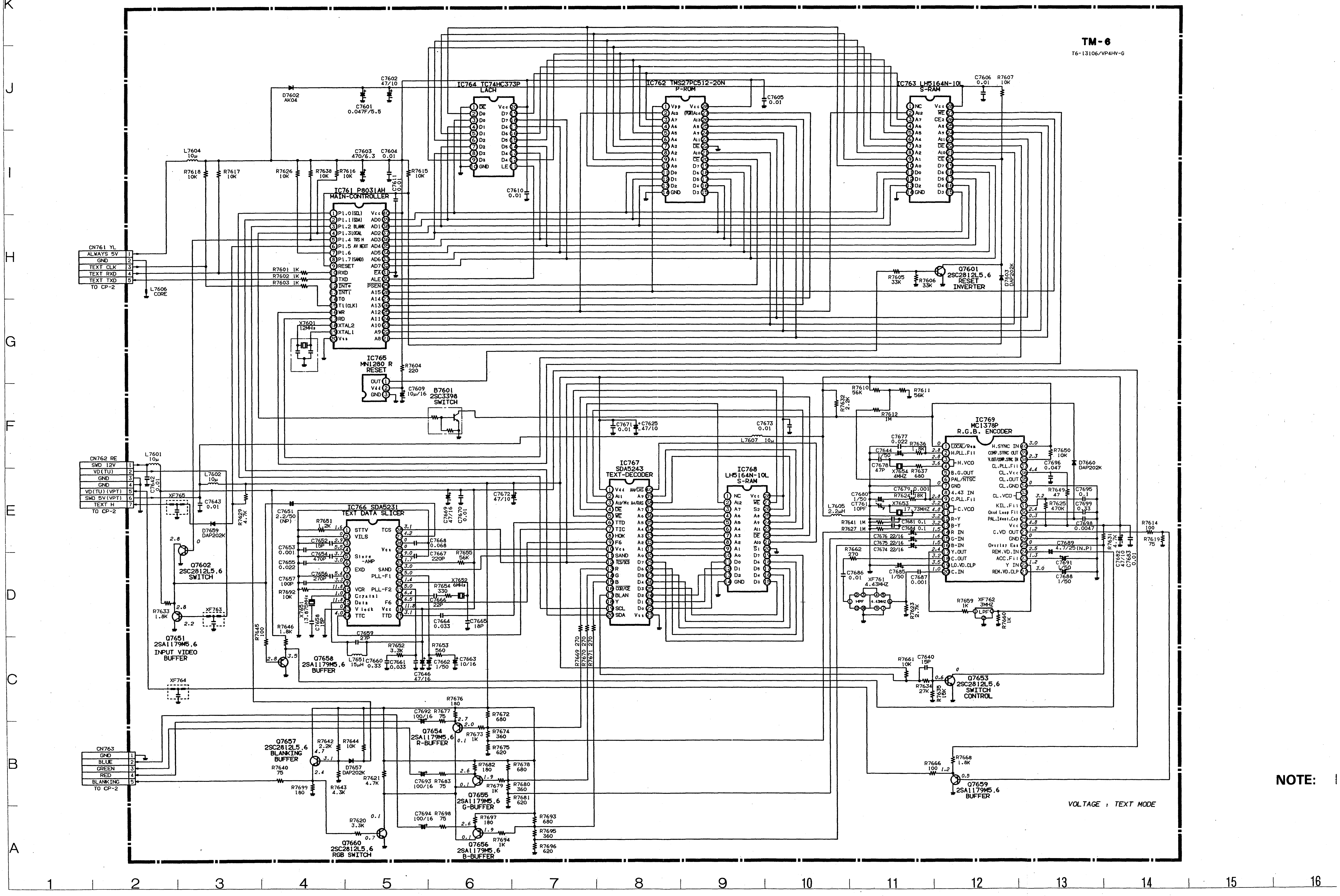

TM-8
T8-12500/RP1-G
CN781
1 ALWAYS 5V
2 SD
3 VPS SDA
4 VPS SCL
5 GND
TO CP-1(TN-A)
C7805 0.1
C7806 22/6.3
Q7801 2SC2812 BUFFER
R7802 1K
5.2
2.8
2.1
R7804 180
R7803 1K
C7802 150P
R7805 2.2K
R7801 470
C7803 0.33
R7806 1M
R7807 820K
R7808 100K
IC781 SDA5642 VPS CONTROL
R7809 10K
14 VDD
13 CVBS
12 IREF
11 VCO
10 INUL
9 PDI
8 TI
1 VSS
2 SCL
3 SDA
4 CSO
5 VCS
6 DAVN
7 EHB
R7811 100
R7812 5.6K
R7810 1.2M
C7804 0.1

2-16. TM-8 CIRUCIT BOARD


TM-8
R7811
R7808
R7812
R7805
R7801
R7803
R7806
R7804
R7802
R7810
C7804
C7803
C7806
IC781
CN781
C1-A/H

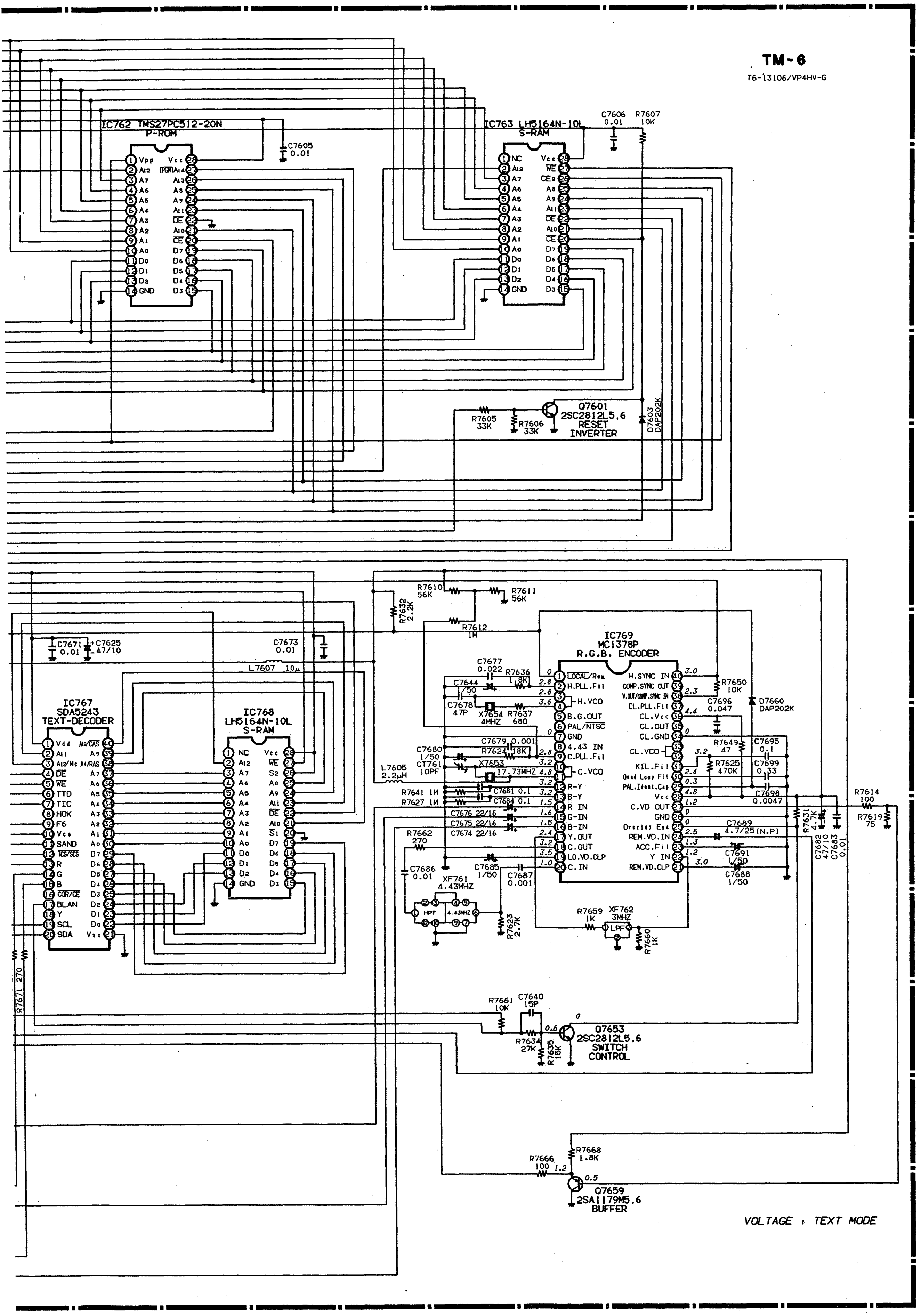
8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23

2-17. TM-6 BOARD VIDEO TEXT DECODER (VPT) CIRCUIT DIAGRAM (OPTION)

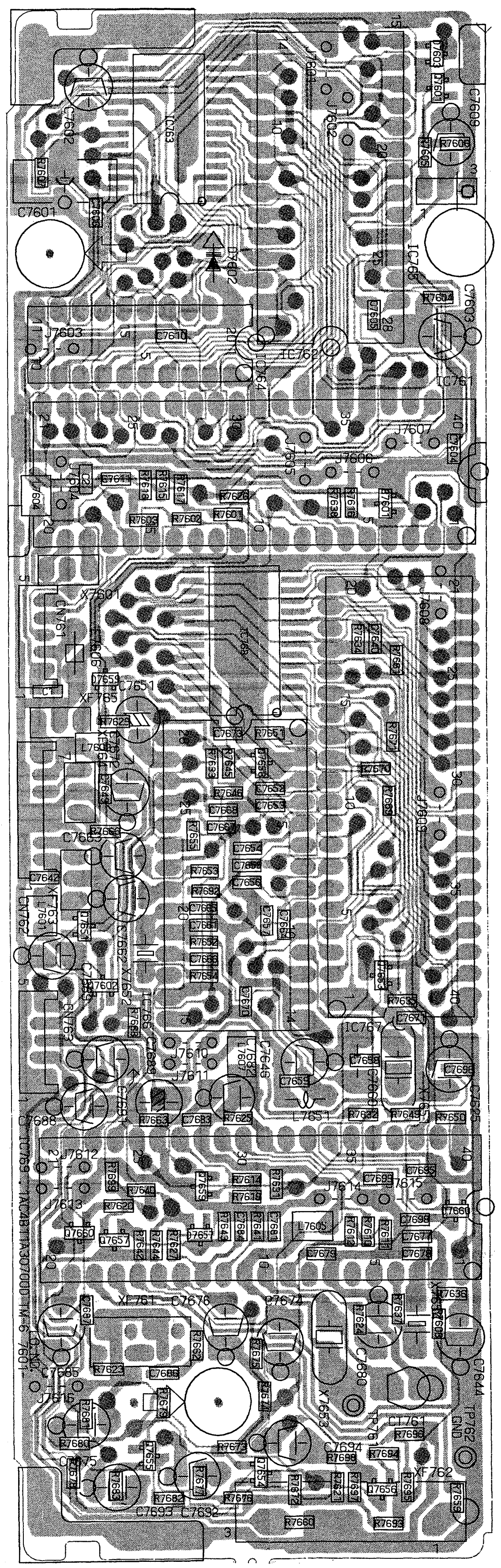

TM-6
T6-13106/VP4HV-G
IC764 TC74HC373P
LACH
IC762 TMS27PC512-20N
P-ROM
IC763 LH5164N-10L
S-RAM
IC761 P8031AH
MAIN-CONTROLLER
IC765
MN1280 R
RESET
B7601
2SC3398
SWITCH
D7602
AK04
C7601
0.047F/5.5
C7602
47/10
C7603
470/6.3
C7604
0.01
C7605
0.01
C7606
0.01
R7607
10K
C7610
0.01
C7611
0.01
L7604
10μ
R7618
10K
R7617
10K
R7626
10K
R7638
10K
R7616
10K
R7615
10K
R7601 1K
R7602 1K
R7603 1K
X7601
12MHz
R7604
220
C7609
10μ/16
CN761 YL
ALWAYS 5V
GND
TEXT CLK
TEXT RXD
TEXT TXD
TO CP-2
L7606
CORE
Q7601
2SC2812L5,6
RESET
INVERTER
R7605
33K
R7606
33K
D7603
DAP202K
CN762 RE
SWD 12V
VD(TU)
GND
GND
VD(TU)(VPT)
SWD 5V(VPT)
TEXT H
TO CP-2
L7601
10μ
L7602
10μ
C7642
0.01
C7643
0.01
XF765
D7659
DAP202K
R7629
4.7K
Q7602
2SC2812L5,6
SWITCH
R7633
1.8K
XF763
Q7651
2SA1179M5,6
INPUT VIDEO
BUFFER
XF764
IC766 SDA5231
TEXT DATA SLICER
C7651
2.2/50
(NP)
R7651
1.2K
C7652 15P
C7653
0.001
C7654 470P
C7655
0.022
C7656 270P
C7657
100P
R7692
10K
X7651
13.875MHz
C7658
15P
STTV
VILS
Store
-AMP
EXD
VCR
Crystal
Data
V lock
TTC
TCS
Vcc
SAND
PLL-F1
PLL-F2
F6
Vcc
TTD
C7668
0.068
C7667
220P
R7655
56K
X7652
6MHz
R7654
330
C7666
22P
C7664
0.033
C7665
18P
C7669
47/16
C7670
0.01
C7672
47/10
C7659
27P
L7651
15μH
C7660
0.33
C7661
0.033
R7652
3.3K
R7653
560
C7662
1/50
C7663
10/16
C7646
47/16
R7645
100
R7646
1.8K
Q7658
2SA1179M5,6
BUFFER
C7671
0.01
C7625
47/10
C7673
0.01
L7607 10μ
IC767
SDA5243
TEXT-DECODER
IC768
LH5164N-10L
S-RAM
R7669 270
R7670 270
R7671 270
R7610
56K
R7611
56K
R7632
2.2K
R7612
1M
IC769
MC1378P
R.G.B. ENCODER
C7677
0.022
R7636
1.8K
C7644
1/50
C7678
47P
X7654
4MHZ
R7637
680
C7679 0.001
R7624 18K
X7653
17.73MHZ
C7680
1/50
C7761
10PF
L7605
2.2μH
R7641 1M
R7627 1M
C7681 0.1
C7684 0.1
C7676 22/16
C7675 22/16
C7674 22/16
R7662
270
C7686
0.01
XF761
4.43MHZ
HPF
LPF
C7685
1/50
C7687
0.001
R7623
2.7K
R7659
1K
XF762
3MHZ
R7660
1K
R7650
10K
C7696
0.047
D7660
DAP202K
R7649
47
C7695
0.1
R7625
470K
C7699
0.33
C7698
0.0047
C7689
4.7/25(N.P)
C7691
1/50
C7688
1/50
R7631
4.7K
C7682
47/16
C7683
0.01
R7614
100
R7619
75
H.SYNC IN
H.PLL.Fil
H.VCO
B.G.OUT
PAL/NTSC
GND
4.43 IN
C.PLL.Fil
C.VCO
R-Y
B-Y
R IN
G-IN
B-IN
Y.OUT
C.OUT
LO.VD.CLP
C.IN
CL.PLL.Fil
CL.Vcc
CL.OUT
CL.GND
CL.VCO
KIL.Fil
C.VD OUT
GND
REM.VD.IN
ACC.Fil
Y IN
REM.VD.CLP
R7661
10K
C7640
15P
R7634
27K
R7635
6.8K
Q7653
2SC2812L5,6
SWITCH
CONTROL
CN763
GND
BLUE
GREEN
RED
BLANKING
TO CP-2
Q7657
2SC2812L5,6
BLANKING
BUFFER
R7642
2.2K
R7644
10K
R7640
75
R7699
180
D7657
DAP202K
R7643
4.3K
R7621
4.7K
R7676
180
C7692
100/16
R7677
75
Q7654
2SA1179M5,6
R-BUFFER
R7673
1K
R7672
680
R7674
360
R7675
620
C7693
100/16
R7663
75
R7682
180
R7679
1K
R7678
680
R7680
360
R7681
620
Q7655
2SA1179M5,6
G-BUFFER
C7694
100/16
R7698
75
R7697
180
R7694
1K
R7693
680
R7695
360
R7696
620
Q7656
2SA1179M5,6
B-BUFFER
R7620
3.3K
Q7660
2SC2812L5,6
RGB SWITCH
R7666
100
R7668
1.8K
Q7659
2SA1179M5,6
BUFFER
VOLTAGE : TEXT MODE
K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

NOTE:

T DECODER (VPT) CIRCUIT DIAGRAM (OPTION)


TM-6
T6-13106/VP4HV-G
IC762 TMS27PC512-20N
P-ROM
C7605 0.01
IC763 LH5164N-10L
S-RAM
C7606 0.01
R7607 10K
R7605 33K
R7606 33K
Q7601
2SC2812L5.6
RESET
INVERTER
D7603 DAP202K
R7610 56K
R7611 56K
R7632 2.2K
R7612 1M
C7671 0.01
C7625 47/10
C7673 0.01
L7607 10μ
IC767
SDA5243
TEXT-DECODER
IC768
LH5164N-10L
S-RAM
IC769
MC1378P
R.G.B. ENCODER
C7677 0.022
R7636 1.8K
C7644 1/50
C7678 47P
X7654 4MHZ
R7637 680
C7679 0.001
R7624 18K
X7653 17.73MHZ
C7680 1/50
C7761 10PF
L7605 2.2μH
R7641 1M
R7627 1M
C7681 0.1
C7684 0.1
C7676 22/16
C7675 22/16
C7674 22/16
R7662 270
C7686 0.01
XF761 4.43MHZ
C7685 1/50
C7687 0.001
R7650 10K
D7660 DAP202K
C7696 0.047
R7649 47
R7625 470K
C7695 0.1
C7699 0.33
C7698 0.0047
C7689 4.7/25(N.P)
C7691 1/50
C7688 1/50
R7614 100
R7619 75
R7631 4.7K
C7682 47/10
C7683 0.01
R7659 1K
XF762 3MHZ
LPF
R7660 1K
R7623 2.7K
R7661 10K
C7640 15P
R7634 27K
R7635 10K
Q7653
2SC2812L5.6
SWITCH
CONTROL
R7666 100
R7668 1.8K
Q7659
2SA1179M5.6
BUFFER
R7671 270
VOLTAGE : TEXT MODE

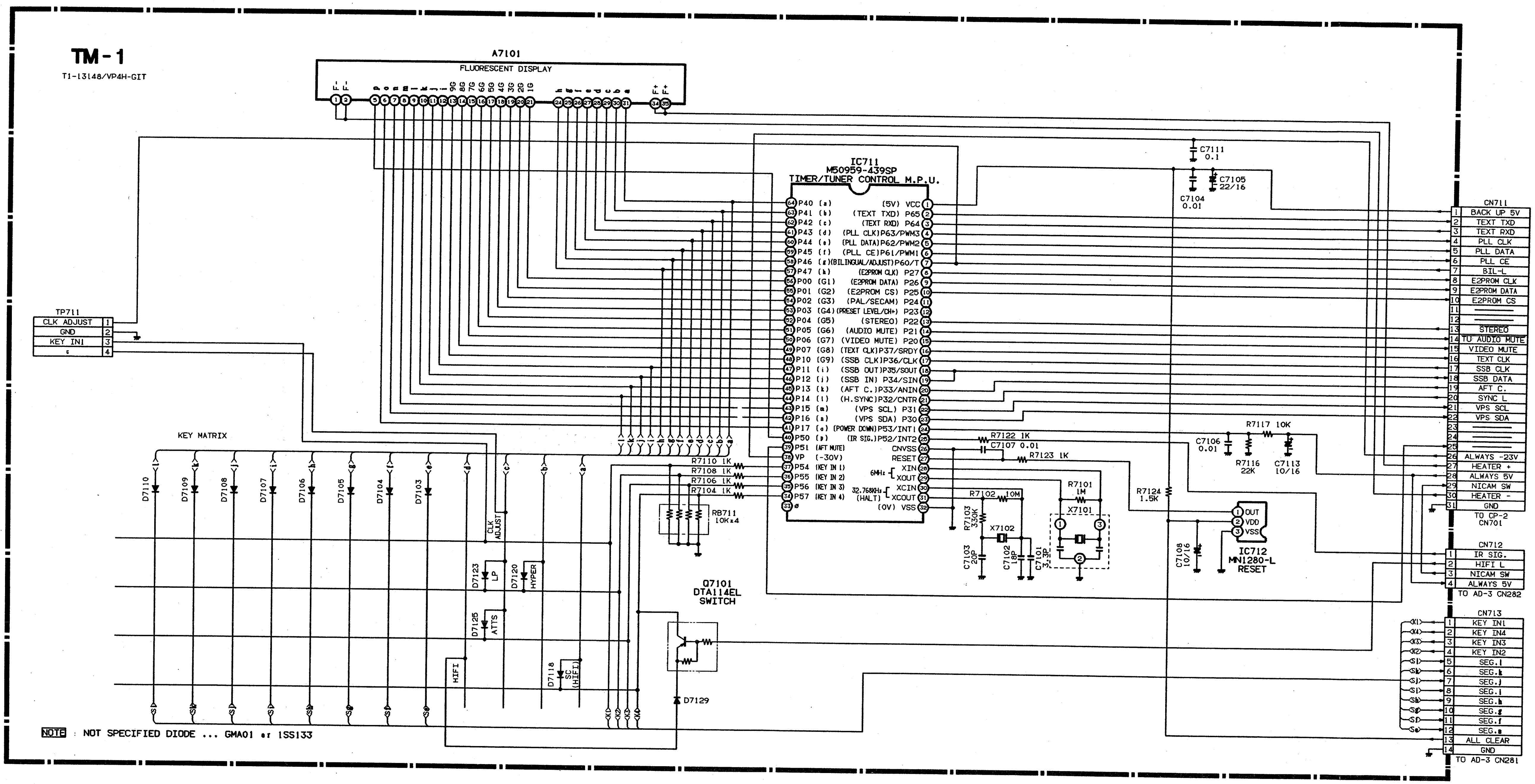
2-18. TM-6 CIRUCIT BOARD (OPTION)


C7601
IC762
IC767
X7601
XF761
XF762
J7607
J7612
J7613
L7651

NOTE: ▆ **BOTTOM SIDE FOIL**
▨ **TOP SIDE FOIL**

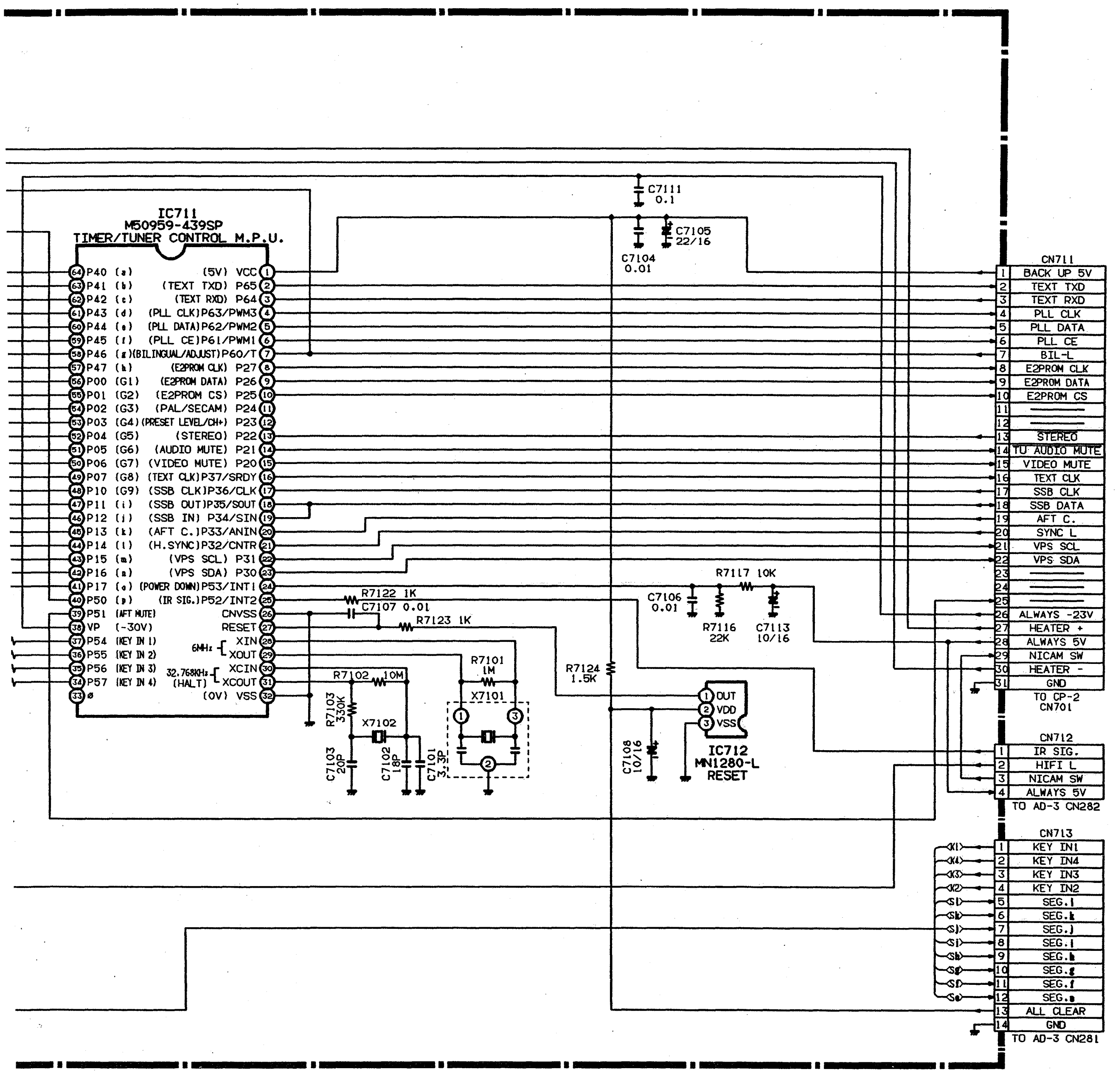
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

2-19. TM-1 BOARD TIMER & TUNING CONTROL CIRCUIT DIAGRAM

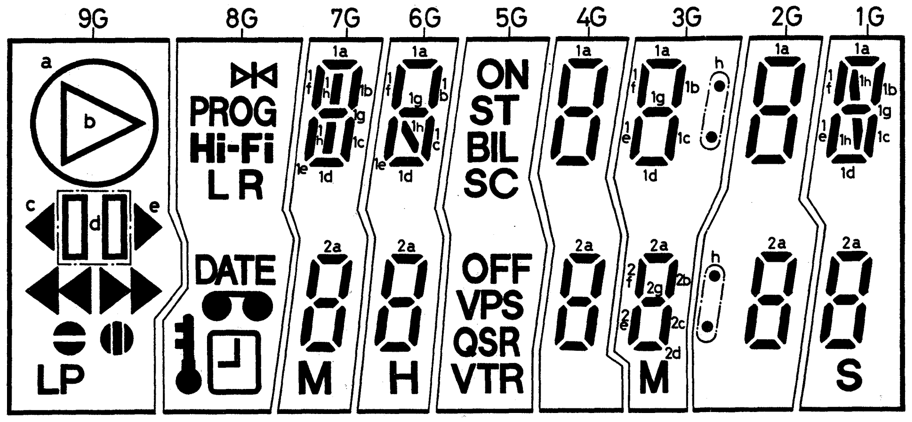

TM-1
T1-13148/VP4H-GIT
A7101
FLUORESCENT DISPLAY
F- F- p o n m l k j i 9G 8G 7G 6G 5G 4G 3G 2G 1G h g f e d c b a F+ F+
IC711
M50959-439SP
TIMER/TUNER CONTROL M.P.U.
64 P40 (a)
63 P41 (b)
62 P42 (c)
61 P43 (d)
60 P44 (e)
59 P45 (f)
58 P46 (g)
57 P47 (h)
56 P00 (G1)
55 P01 (G2)
54 P02 (G3)
53 P03 (G4)
52 P04 (G5)
51 P05 (G6)
50 P06 (G7)
49 P07 (G8)
48 P10 (G9)
47 P11 (i)
46 P12 (j)
45 P13 (k)
44 P14 (l)
43 P15 (m)
42 P16 (n)
41 P17 (o)
40 P50 (p)
39 P51 (AFT MUTE)
38 VP (-30V)
37 P54 (KEY IN 1)
36 P55 (KEY IN 2)
35 P56 (KEY IN 3)
34 P57 (KEY IN 4)
33 ø
(5V) VCC 1
(TEXT TXD) P65 2
(TEXT RXD) P64 3
(PLL CLK) P63/PWM3 4
(PLL DATA) P62/PWM2 5
(PLL CE) P61/PWM1 6
(BILINGUAL/ADJUST) P60/T 7
(E2PROM CLK) P27 8
(E2PROM DATA) P26 9
(E2PROM CS) P25 10
(PAL/SECAM) P24 11
(PRESET LEVEL/CH+) P23 12
(STEREO) P22 13
(AUDIO MUTE) P21 14
(VIDEO MUTE) P20 15
(TEXT CLK) P37/SRDY 16
(SSB CLK) P36/CLK 17
(SSB OUT) P35/SOUT 18
(SSB IN) P34/SIN 19
(AFT C.) P33/ANIN 20
(H.SYNC) P32/CNTR 21
(VPS SCL) P31 22
(VPS SDA) P30 23
(POWER DOWN) P53/INT1 24
(IR SIG.) P52/INT2 25
CNVSS 26
RESET 27
6MHz XIN 28
XOUT 29
32.768KHz (HALT) XCIN 30
XCOUT 31
(0V) VSS 32
TP711
1 CLK ADJUST
2 GND
3 KEY IN1
4 ε
KEY MATRIX
D7110 D7109 D7108 D7107 D7106 D7105 D7104 D7103
CLK ADJUST
D7123 LP
D7120 HYPER
D7125 ATTS
HIFI
D7118 SC (HIFI)
Q7101
DTA114EL
SWITCH
D7129
R7110 1K
R7108 1K
R7106 1K
R7104 1K
RB711
10K×4
C7111 0.1
C7105 22/16
C7104 0.01
R7122 1K
C7107 0.01
R7123 1K
R7102 10M
R7103 330K
C7103 20P
X7102
C7102 18P
C7101 3.3P
R7101 1M
X7101
R7124 1.5K
C7108 10/16
IC712
MN1280-L
RESET
OUT
VDD
VSS
C7106 0.01
R7116 22K
R7117 10K
C7113 10/16
CN711
1 BACK UP 5V
2 TEXT TXD
3 TEXT RXD
4 PLL CLK
5 PLL DATA
6 PLL CE
7 BIL-L
8 E2PROM CLK
9 E2PROM DATA
10 E2PROM CS
11
12
13 STEREO
14 TU AUDIO MUTE
15 VIDEO MUTE
16 TEXT CLK
17 SSB CLK
18 SSB DATA
19 AFT C.
20 SYNC L
21 VPS SCL
22 VPS SDA
23
24
25
26 ALWAYS -23V
27 HEATER +
28 ALWAYS 5V
29 NICAM SW
30 HEATER -
31 GND
TO CP-2 CN701
CN712
1 IR SIG.
2 HIFI L
3 NICAM SW
4 ALWAYS 5V
TO AD-3 CN282
CN713
1 KEY IN1
2 KEY IN4
3 KEY IN3
4 KEY IN2
5 SEG. l
6 SEG. k
7 SEG. j
8 SEG. i
9 SEG. h
10 SEG. g
11 SEG. f
12 SEG. e
13 ALL CLEAR
14 GND
TO AD-3 CN281

NOTE : NOT SPECIFIED DIODE ... GMA01 or 1SS133

ONTROL CIRCUIT DIAGRAM


IC711
M50959-439SP
TIMER/TUNER CONTROL M.P.U.
64 P40 (a) (5V) VCC 1
63 P41 (b) (TEXT TXD) P65 2
62 P42 (c) (TEXT RXD) P64 3
61 P43 (d) (PLL CLK) P63/PWM3 4
60 P44 (e) (PLL DATA) P62/PWM2 5
59 P45 (f) (PLL CE) P61/PWM1 6
58 P46 (g) (BILINGUAL/ADJUST) P60/T 7
57 P47 (h) (E2PROM CLK) P27 8
56 P00 (G1) (E2PROM DATA) P26 9
55 P01 (G2) (E2PROM CS) P25 10
54 P02 (G3) (PAL/SECAM) P24 11
53 P03 (G4) (PRESET LEVEL/CH+) P23 12
52 P04 (G5) (STEREO) P22 13
51 P05 (G6) (AUDIO MUTE) P21 14
50 P06 (G7) (VIDEO MUTE) P20 15
49 P07 (G8) (TEXT CLK) P37/SRDY 16
48 P10 (G9) (SSB CLK) P36/CLK 17
47 P11 (i) (SSB OUT) P35/SOUT 18
46 P12 (j) (SSB IN) P34/SIN 19
45 P13 (k) (AFT C.) P33/ANIN 20
44 P14 (l) (H.SYNC) P32/CNTR 21
43 P15 (m) (VPS SCL) P31 22
42 P16 (n) (VPS SDA) P30 23
41 P17 (o) (POWER DOWN) P53/INT1 24
40 P50 (p) (IR SIG.) P52/INT2 25
39 P51 (AFT MUTE) CNVSS 26
38 VP (-30V) RESET 27
37 P54 (KEY IN 1) 6MHz XIN 28
36 P55 (KEY IN 2) XOUT 29
35 P56 (KEY IN 3) 32.768KHz XCIN 30
34 P57 (KEY IN 4) (HALT) XCOUT 31
33 ø (0V) VSS 32
C7111 0.1
C7105 22/16
C7104 0.01
R7122 1K
C7107 0.01
R7123 1K
R7102 10M
R7103 330K
X7102
C7103 20P
C7102 18P
C7101 3.3P
R7101 1M
X7101
R7124 1.5K
C7106 0.01
R7117 10K
R7116 22K
C7113 10/16
C7108 10/16
IC712 MN1280-L RESET
1 OUT
2 VDD
3 VSS
CN711
1 BACK UP 5V
2 TEXT TXD
3 TEXT RXD
4 PLL CLK
5 PLL DATA
6 PLL CE
7 BIL-L
8 E2PROM CLK
9 E2PROM DATA
10 E2PROM CS
11
12
13 STEREO
14 TU AUDIO MUTE
15 VIDEO MUTE
16 TEXT CLK
17 SSB CLK
18 SSB DATA
19 AFT C.
20 SYNC L
21 VPS SCL
22 VPS SDA
23
24
25
26 ALWAYS -23V
27 HEATER +
28 ALWAYS 5V
29 NICAM SW
30 HEATER -
31 GND
TO CP-2 CN701
CN712
1 IR SIG.
2 HIFI L
3 NICAM SW
4 ALWAYS 5V
TO AD-3 CN282
CN713
1 KEY IN1
2 KEY IN4
3 KEY IN3
4 KEY IN2
5 SEG.l
6 SEG.k
7 SEG.j
8 SEG.i
9 SEG.h
10 SEG.g
11 SEG.f
12 SEG.e
13 ALL CLEAR
14 GND
TO AD-3 CN281
K1
K4
K3
K2
Sl
Sk
Sj
Si
Sh
Sg
Sf
Se

A7001 DISPLAY GRID/ANODE ASSIGNMENT

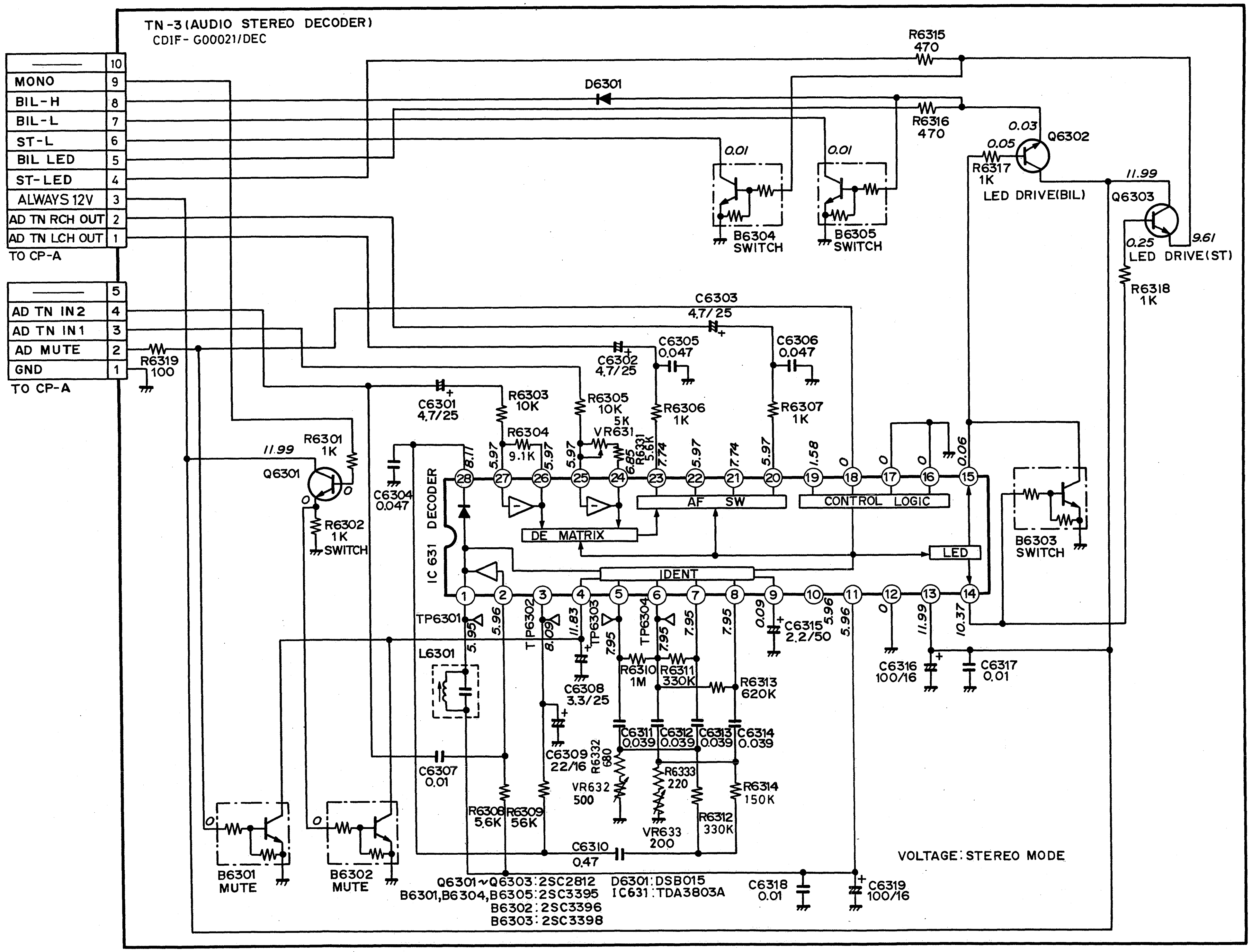

9G
8G
7G
6G
5G
4G
3G
2G
1G
a
b
c
d
e
LP
PROG
Hi-Fi
L R
DATE
ON
ST
BIL
SC
OFF
VPS
QSR
VTR
1a
1b
1c
1d
1e
1f
1g
1h
2a
2b
2c
2d
2e
2f
2g
h
M
H
M
S

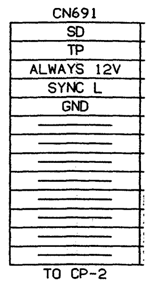
A7001 DISPLAY TABLE OF GRID/ANODE CONNECTION

	9G	8G	7G	6G	5G	4G	3G	2G	1G
a	○	¤	1a	1a	ON	1a	1a	1a	1a
b	▷	⋈	1b	1b	ST	1b	1b	1b	1b
c	◀	PROG	1c	1c	BIL	1c	1c	1c	1c
d	▯▯	Hi-Fi	1d	1d	SC	1d	1d	1d	1d
e	▶	L	1e	1e	–	1e	1e	1e	1e
f	–	R	1f	1f	–	1f	1f	1f	1f
g	–	–	1g	1g	–	1g	1g	1g	1g
h	–	–	1h	1h	–	–	: (UPPER)	: (LOWER)	1h
i	◀◀	DATE	2a	2a	OFF	2a	2a	2a	2a
j	▶▶	●●	2b	2b	VPS	2b	2b	2b	2b
k	⊖	🌡	2c	2c	QSR	2c	2c	2c	2c
l	◍	◫	2d	2d	VTR	2d	2d	2d	2d
m	LP	–	2e	2e	–	2e	2e	2e	2e
n	EP	–	2f	2f	–	2f	2f	2f	2f
o	–	–	2g	2g	–	2g	2g	2g	2g
p	–	–	M	H	–	H	M	M	S

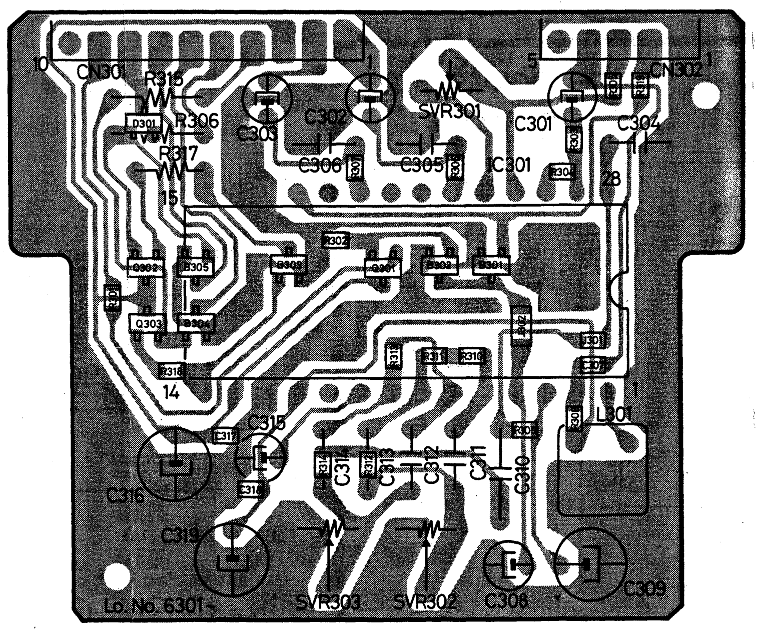
9G/QP

2-20. TUNER AUDIO STEREO DECODER CIRCUIT DIAGRAM

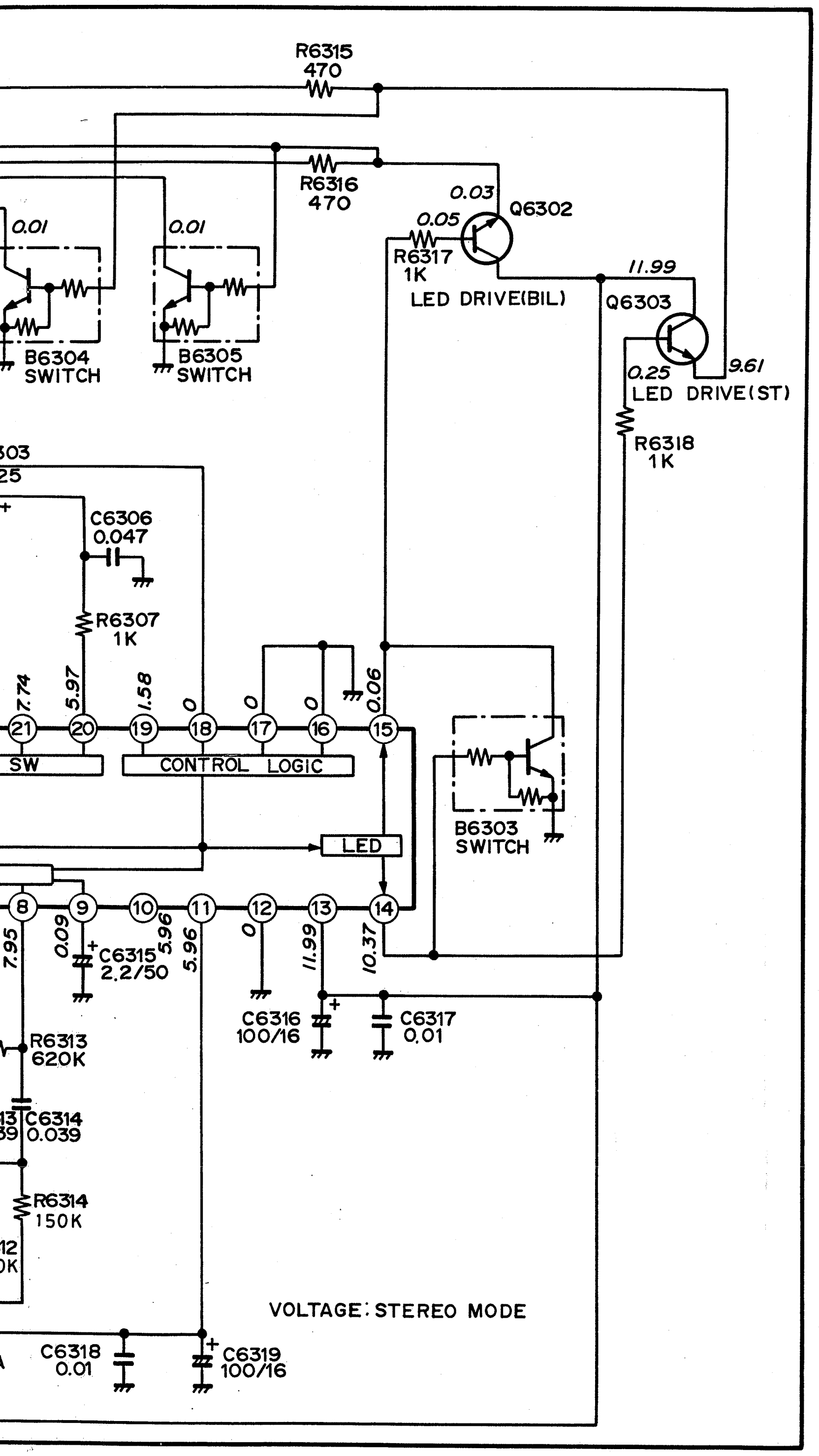

TN-3(AUDIO STEREO DECODER)
CDIF-G00021/DEC
10
MONO 9
BIL-H 8
BIL-L 7
ST-L 6
BIL LED 5
ST-LED 4
ALWAYS 12V 3
AD TN RCH OUT 2
AD TN LCH OUT 1
TO CP-A
5
AD TN IN2 4
AD TN IN1 3
AD MUTE 2
GND 1
TO CP-A
R6319 100
R6315 470
D6301
R6316 470
0.03
0.05
Q6302
R6317 1K
LED DRIVE(BIL)
11.99
Q6303
0.25
9.61
LED DRIVE(ST)
R6318 1K
0.01
0.01
B6304 SWITCH
B6305 SWITCH
C6303 4.7/25
C6305 0.047
C6306 0.047
C6302 4.7/25
C6301 4.7/25
R6303 10K
R6304 9.1K
R6305 10K
5K
VR631
R6331 5.6K
R6306 1K
R6307 1K
R6301 1K
11.99
Q6301
0
R6302 1K
SWITCH
C6304 0.047
IC 631 DECODER
DE MATRIX
AF SW
CONTROL LOGIC
LED
IDENT
B6303 SWITCH
8.11 5.97 5.97 5.97 6.85 7.74 5.97 7.74 5.97 1.58 0 0 0 0.06
5.95 5.96 8.09 11.83 7.95 7.95 7.95 7.95 0.09 5.96 5.96 0 11.99 10.37
TP6301
TP6302
TP6303
TP6304
L6301
C6308 3.3/25
R6310 1M
R6311 330K
R6313 620K
C6315 2.2/50
C6316 100/16
C6317 0.01
C6309 22/16
R6332 680
VR632 500
C6311 0.039
C6312 0.039
C6313 0.039
C6314 0.039
R6333 220
VR633 200
R6314 150K
R6312 330K
C6307 0.01
R6308 5.6K
R6309 56K
C6310 0.47
B6301 MUTE
B6302 MUTE
C6318 0.01
C6319 100/16
VOLTAGE: STEREO MODE
Q6301~Q6303: 2SC2812
B6301,B6304,B6305: 2SC3395
B6302: 2SC3396
B6303: 2SC3398
D6301: DSB015
IC631: TDA3803A


CN691
SD
TP
ALWAYS 12V
SYNC L
GND
TO CP-2

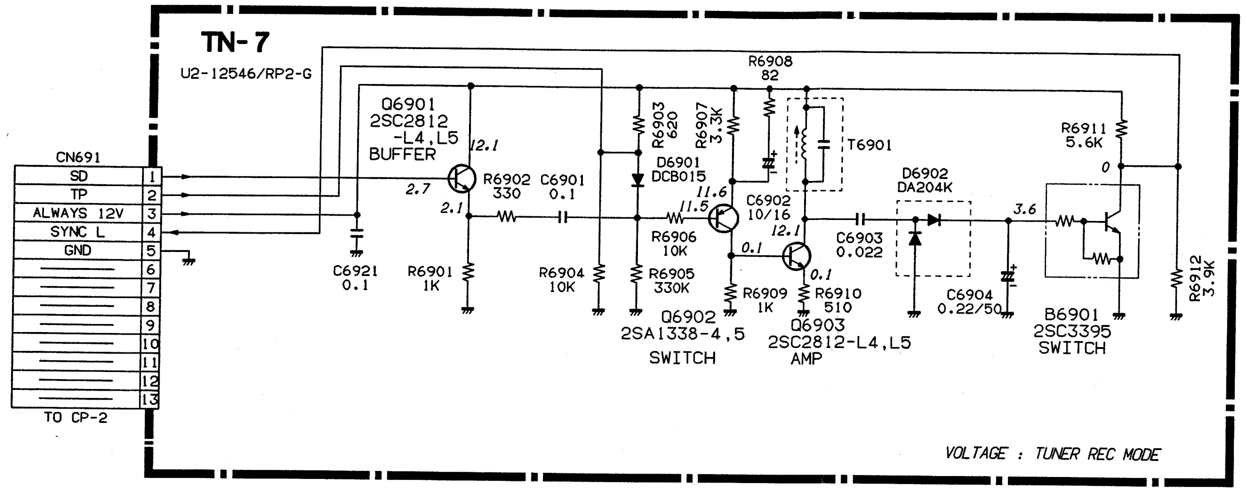
2-21. DECODER CIRCUIT BOARD


CN301
CN302
R315
R306
R317
SVR301
C302
C303
C301
C304
C306
C305
Q301
Q302
Q303
Q304
Q305
Q306
L301
C315
C316
C319
C313
C312
C311
C310
SVR303
SVR302
C308
C309
Lo. No. 6301

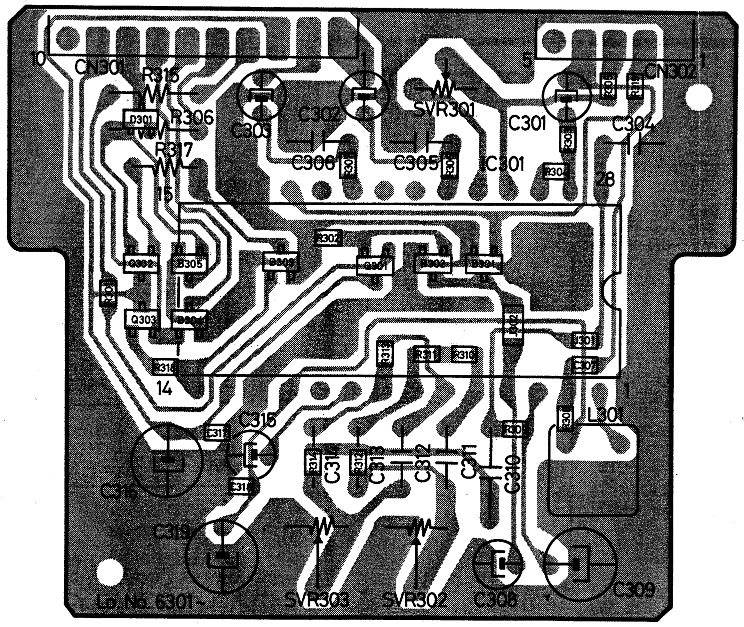
ER CIRCUIT DIAGRAM


R6315
470
R6316
470
0.03
Q6302
0.05
R6317
1K
LED DRIVE(BIL)
11.99
Q6303
9.61
0.25
LED DRIVE(ST)
R6318
1K
0.01
0.01
B6304
SWITCH
B6305
SWITCH
303
25
C6306
0.047
R6307
1K
7.74
5.97
1.58
0
0
0
0.06
21
20
19
18
17
16
15
SW
CONTROL LOGIC
B6303
SWITCH
LED
8
9
10
11
12
13
14
7.95
0.09
5.96
5.96
0
11.99
10.37
C6315
2.2/50
C6316
100/16
C6317
0.01
R6313
620K
C6314
0.039
R6314
150K
VOLTAGE: STEREO MODE
C6318
0.01
C6319
100/16

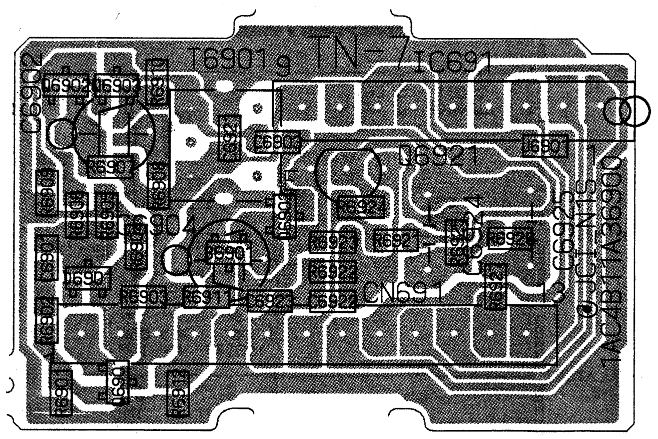
2-22. TN-7 BOARD SYNC DETECTOR CIRCUIT DIAGRAM


TN-7
U2-12546/RP2-G
CN691
SD 1
TP 2
ALWAYS 12V 3
SYNC L 4
GND 5
6
7
8
9
10
11
12
13
TO CP-2
Q6901
2SC2812
-L4,L5
BUFFER
12.1
2.7
2.1
R6902
330
C6901
0.1
C6921
0.1
R6901
1K
R6904
10K
R6903
620
D6901
DCB015
R6907
3.3K
R6908
82
T6901
11.6
11.5
C6902
10/16
12.1
R6906
10K
R6905
330K
0.1
R6909
1K
0.1
R6910
510
Q6902
2SA1338-4,5
SWITCH
Q6903
2SC2812-L4,L5
AMP
C6903
0.022
D6902
DA204K
C6904
0.22/50
3.6
R6911
5.6K
0
B6901
2SC3395
SWITCH
R6912
3.9K
VOLTAGE : TUNER REC MODE

2-21. DECODER CIRCUIT BOARD

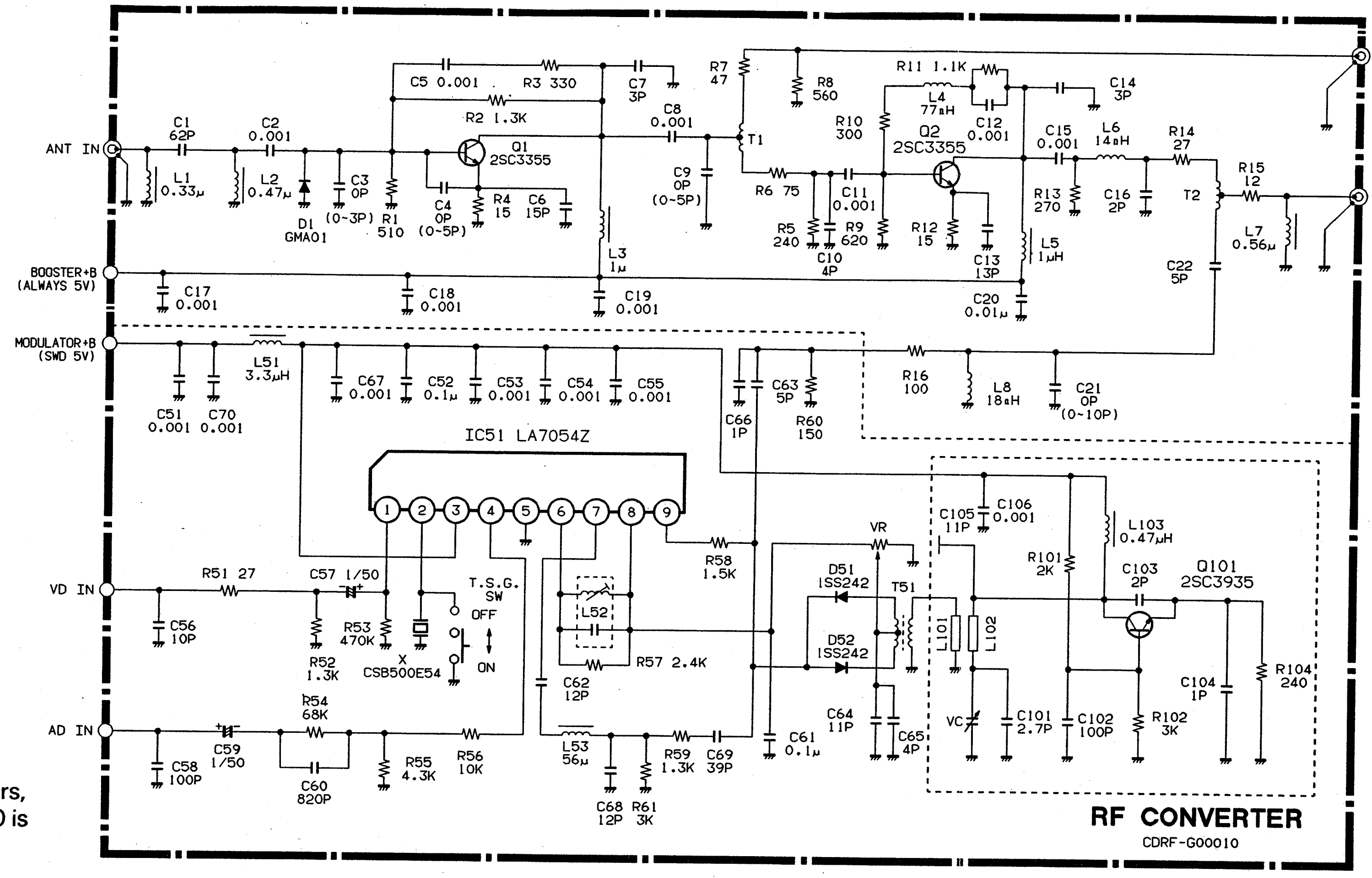

10
CN301
R316
R306
R317
15
C303
C302
C306
C305
SVR301
C301
IC301
C304
CN302
1
5
28
14
1
C315
C316
C311
C319
C314
C313
C312
C311
C310
L301
Lo.No. 6301-
SVR303
SVR302
C308
C309

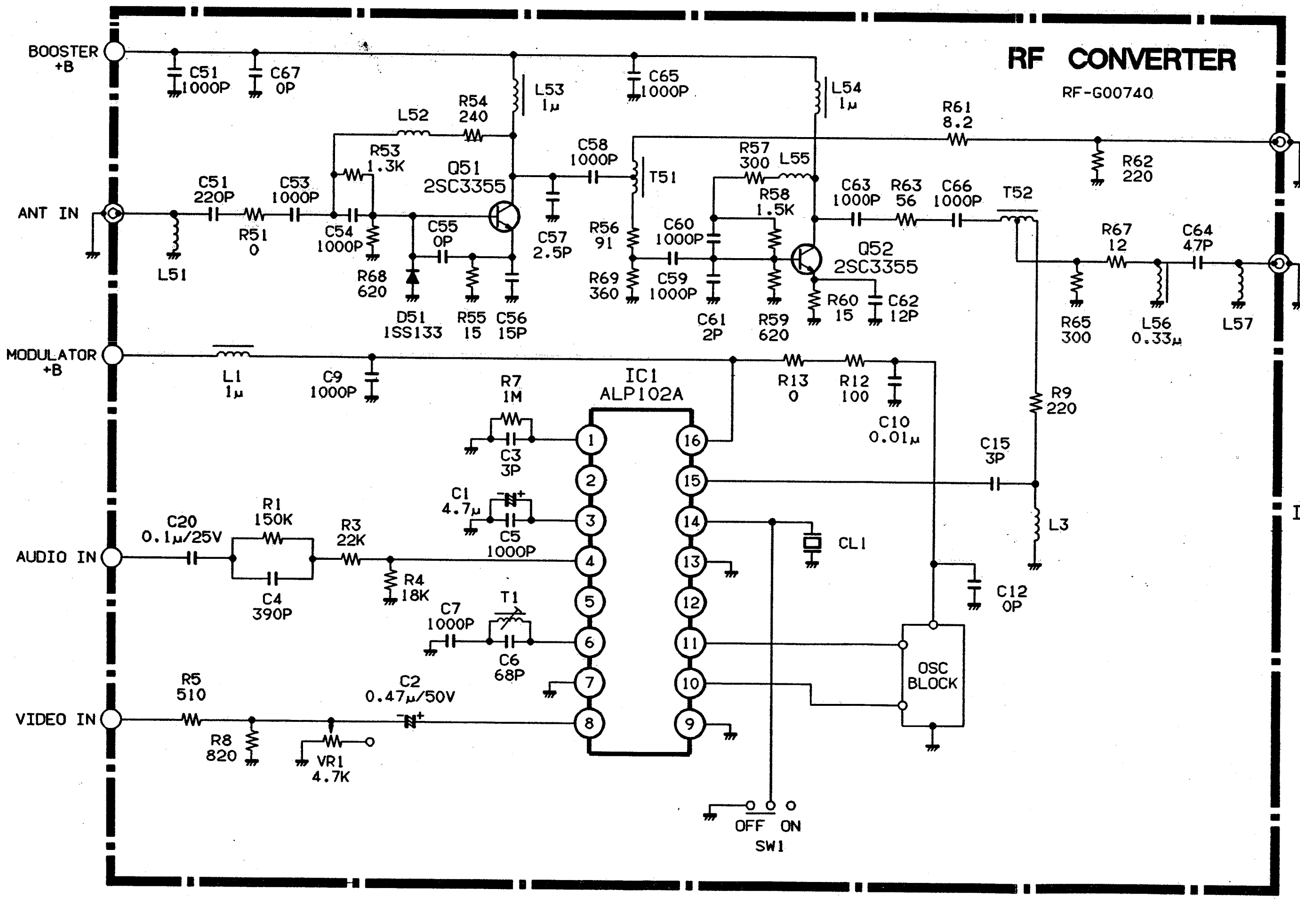
2-23. TN-7 CIRCUIT BOARD

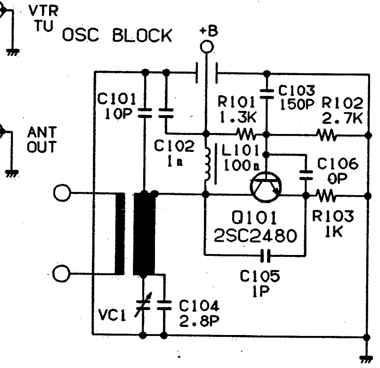

T6901
TN-7
IC691
Q6902
Q6903
Q6921
D6901
CN691
R6901
R6902
R6903
R6904
R6905
R6921
R6922
R6923
R6924
C6921
C6922
C6923
C6901
C6904
D6902

2-24. RF CONVERTER CIRCUIT DIAGRAM

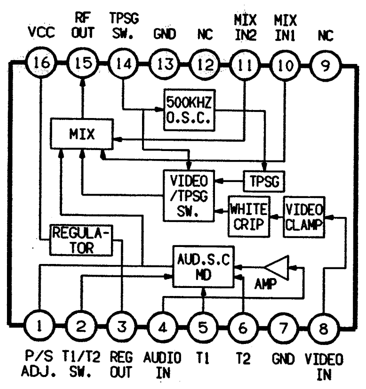
Note: Either one of these RF converters, type CDRF-G00010 or CDRF-G00740 is used, depending on availability.

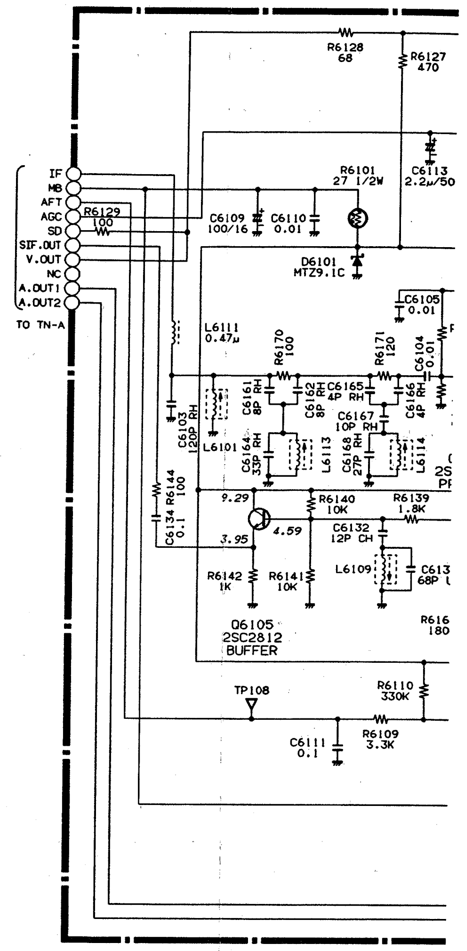

ANT IN
BOOSTER+B (ALWAYS 5V)
MODULATOR+B (SWD 5V)
VD IN
AD IN
TUNER OUT
ANT OUT
Q1 2SC3355
Q2 2SC3355
IC51 LA7054Z
T.S.G. SW
OFF
ON
X CSB500E54
D51 1SS242
D52 1SS242
Q101 2SC3935
T51
VR
RF CONVERTER
CDRF-G00010

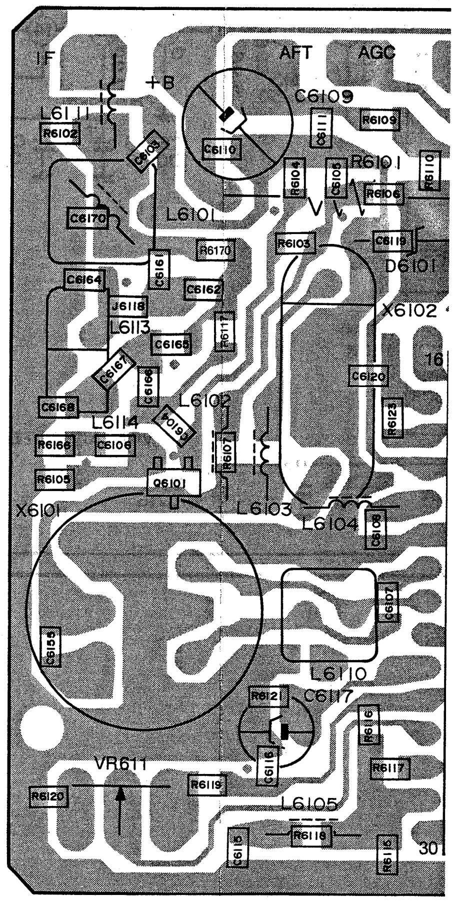

RF CONVERTER
RF-G00740
BOOSTER +B
ANT IN
MODULATOR +B
AUDIO IN
VIDEO IN
VTR TU
ANT OUT
Q51 2SC3355
Q52 2SC3355
D51 1SS133
IC1 ALP102A
OSC BLOCK
CL1
OFF ON
SW1


OSC BLOCK
+B
C101 10P
R101 1.3K
C103 150P
R102 2.7K
C102 1μ
L101 100n
C106 0P
Q101 2SC2480
R103 1K
C105 1P
VC1
C104 2.8P

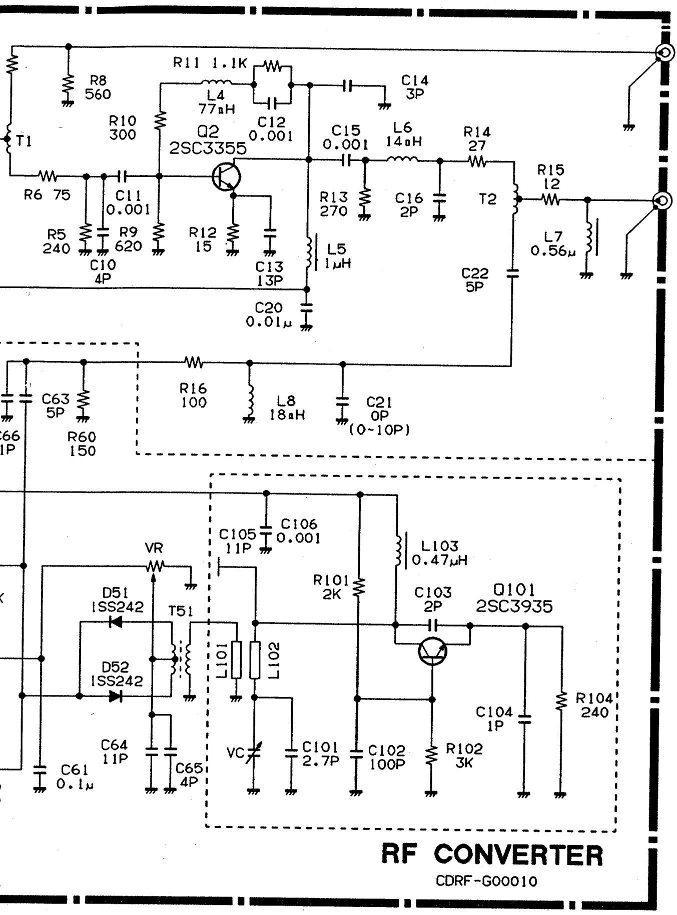
IC1 BLOCK DIAGRAM

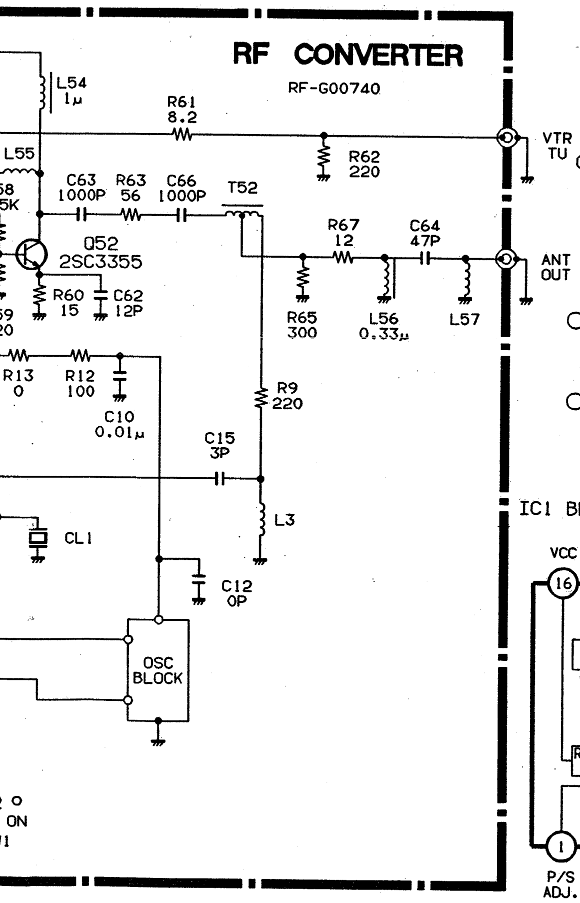

VCC
RF OUT
TPSG SW.
GND
NC
MIX IN2
MIX IN1
NC
500KHZ O.S.C.
MIX
VIDEO /TPSG SW.
TPSG
WHITE CRIP
VIDEO CLAMP
REGULA-TOR
AUD.S.C MD
AMP
P/S ADJ.
T1/T2 SW.
REG OUT
AUDIO IN
T1
T2
GND
VIDEO IN


IF
MB
AFT
AGC
SD
SIF.OUT
V.OUT
NC
A.OUT1
A.OUT2
TO TN-A
Q6105 2SC2812 BUFFER
D6101 MTZ9.1C
TP108

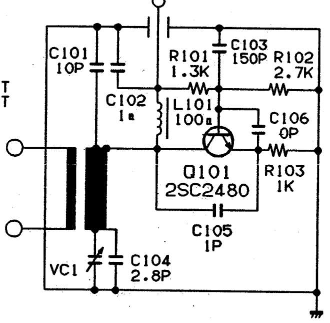

IF
+B
AFT
AGC
C6109
L6101
D6101
X6102
L6113
L6102
L6114
Q6101
X6101
L6103
L6104
L6110
C6117
VR611
L6105

ER CIRCUIT DIAGRAM

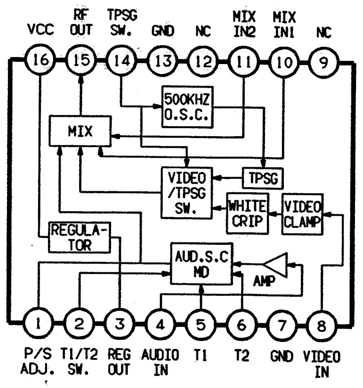

TUNER OUT
ANT OUT
Q2 2SC3355
Q101 2SC3935
D51 1SS242
D52 1SS242
RF CONVERTER
CDRF-G00010


RF CONVERTER
RF-G00740
VTR TU
ANT OUT
Q52 2SC3355
OSC BLOCK

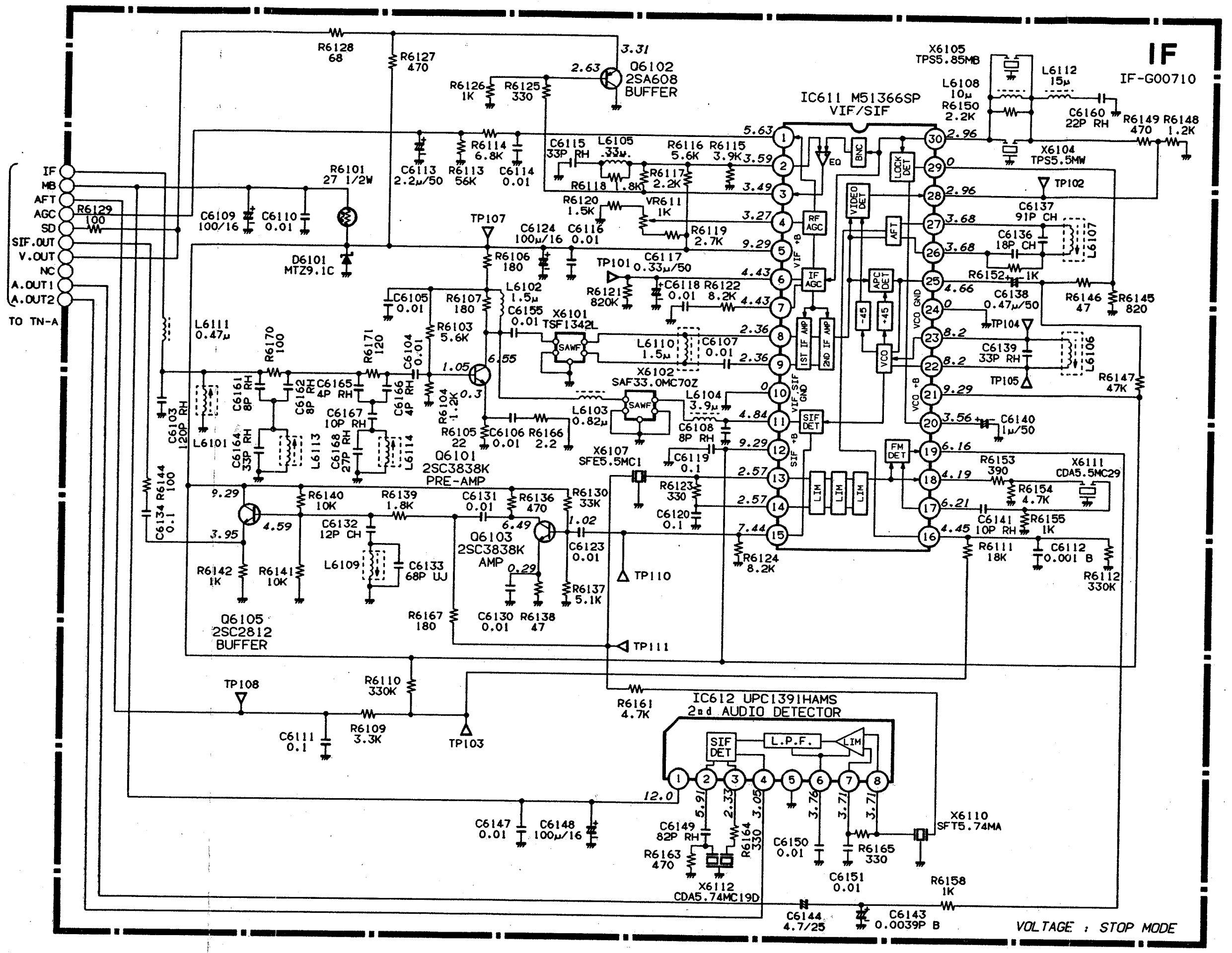
OSC BLOCK


+B
Q101 2SC2480
VC1

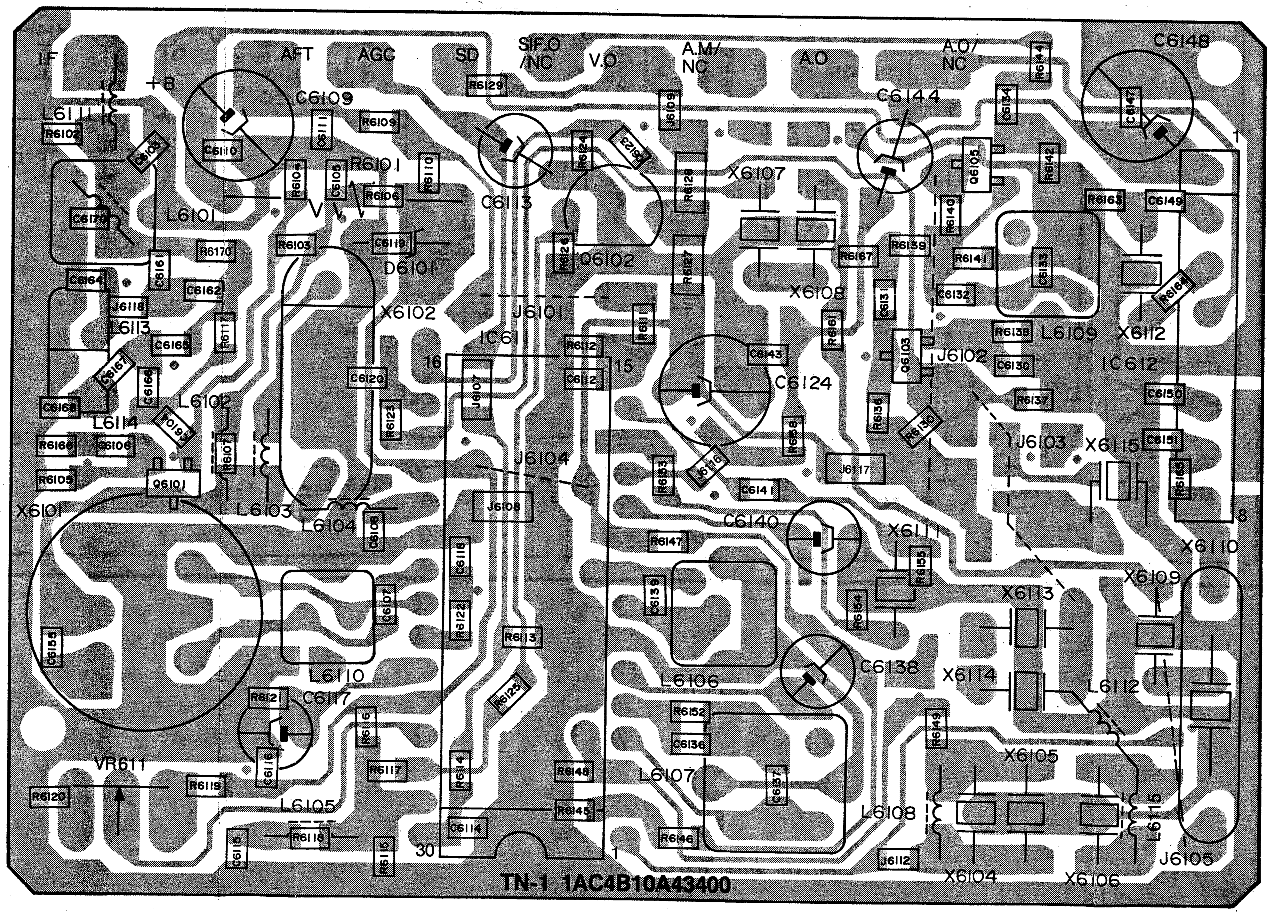
IC1 BLOCK DIAGRAM


VCC
RF OUT
TPSG SW.
GND
NC
MIX IN2
MIX IN1
NC
500KHZ O.S.C.
MIX
VIDEO /TPSG SW.
TPSG
WHITE CRIP
VIDEO CLAMP
REGULA-TOR
AUD.S.C MD
AMP
P/S ADJ.
T1/T2 SW.
REG OUT
AUDIO IN
T1
T2
GND
VIDEO IN

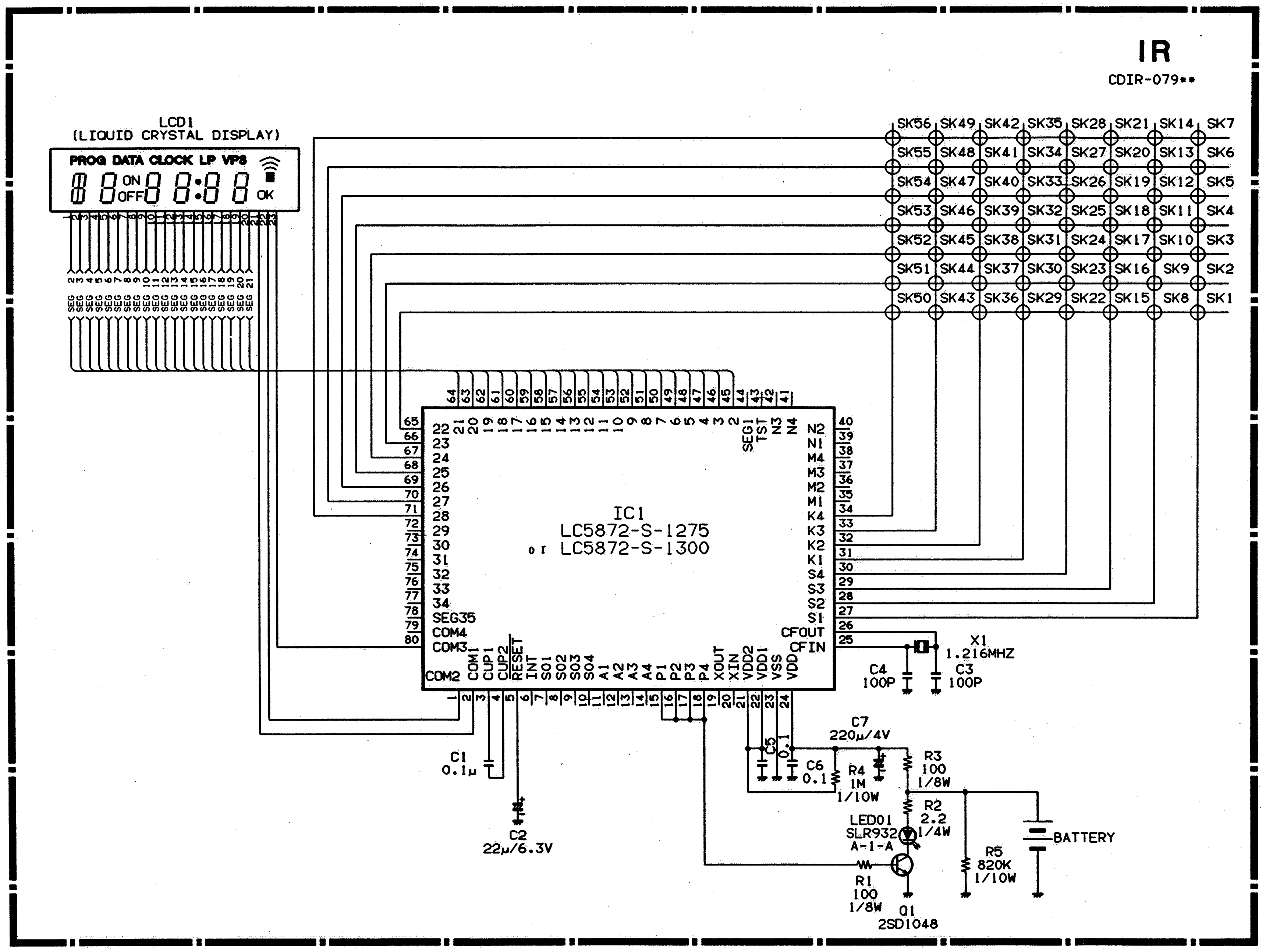
2-25. IF CIRCUIT DIAGRAM


IF
IF-G00710
IC611 M51366SP VIF/SIF
IC612 UPC1391HAMS 2nd AUDIO DETECTOR
Q6102 2SA608 BUFFER
Q6101 2SC3838K PRE-AMP
Q6103 2SC3838K AMP
Q6105 2SC2812 BUFFER
TO TN-A
VOLTAGE : STOP MODE

2-26. IF CIRCUIT BOARD


TN-1 1AC4B10A43400

2-27. IR REMOTE CONTROL CIRCUIT DIAGRAM

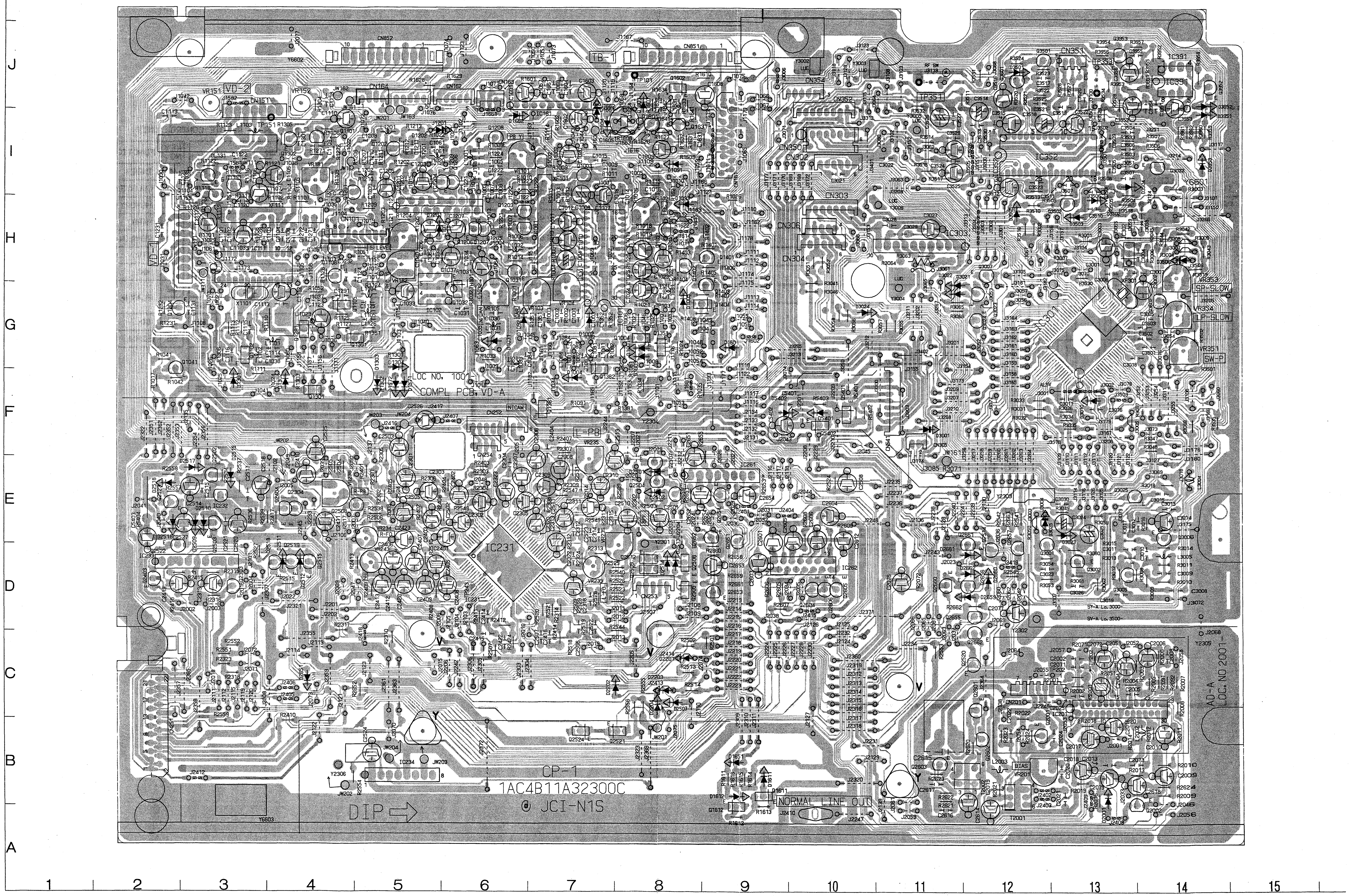

IR
CDIR-079**
LCD1
(LIQUID CRYSTAL DISPLAY)
PROG DATA CLOCK LP VPS
ON
OFF
OK
SEG2 SEG3 SEG4 SEG5 SEG6 SEG7 SEG8 SEG9 SEG10 SEG11 SEG12 SEG13 SEG14 SEG15 SEG16 SEG17 SEG18 SEG19 SEG20 SEG21
SK56 SK49 SK42 SK35 SK28 SK21 SK14 SK7
SK55 SK48 SK41 SK34 SK27 SK20 SK13 SK6
SK54 SK47 SK40 SK33 SK26 SK19 SK12 SK5
SK53 SK46 SK39 SK32 SK25 SK18 SK11 SK4
SK52 SK45 SK38 SK31 SK24 SK17 SK10 SK3
SK51 SK44 SK37 SK30 SK23 SK16 SK9 SK2
SK50 SK43 SK36 SK29 SK22 SK15 SK8 SK1
IC1
LC5872-S-1275
or LC5872-S-1300
SEG1 TST N3 N4
N2 N1 M4 M3 M2 M1 K4 K3 K2 K1 S4 S3 S2 S1 CFOUT CFIN
SEG35 COM4 COM3 COM2
COM1 CUP1 CUP2 RESET INT SO1 SO2 SO3 SO4 A1 A2 A3 A4 P1 P2 P3 P4 XOUT XIN VDD2 VDD1 VSS VDD
X1
1.216MHZ
C4
100P
C3
100P
C1
0.1μ
C2
22μ/6.3V
C7
220μ/4V
C5
0.1
C6
0.1
R4
1M
1/10W
R3
100
1/8W
R2
2.2
1/4W
LED01
SLR932
A-1-A
R5
820K
1/10W
BATTERY
R1
100
1/8W
Q1
2SD1048

AVAILABLE KEY FUNCTION OF REMOTE CONTROL UNIT

KEY NO.	FUNCTION		KEY NO.	FUNCTION		KEY NO.	FUNCTION	
1	ON-OFF	USE	23	7	USE	45	INDEX ¦ EXPAND	USE
2	SUBTITLE		24	8	USE	46	COUNTER ¦ TIME	USE
3	VPS	USE	25	9	USE	47	MEMORY ¦ STOP	USE
4	SP/LP	USE	26	CHANNEL-	USE	48	MARK	USE
5	(TRANS)	USE	27	■ STOP	USE	49	REMAIN	USE
6	● REC	USE	28	SPEED+	USE	50	ATR	USE
7	DUBBING	USE	29	MENU	USE	51	◁◁	USE
8	CLOCK	USE	30	CL	USE	52	PLAY ▶	USE
9	1	USE	31	0/AV	USE	53		
10	2	USE	32	OK	USE	54	▷▷	USE
11	3	USE	33	TV	USE	55	SIMUL	USE
12	VCR/TV		34	▮▮PAUSE	USE			
13	● REC	USE	35	SLOW	USE			
14	INSERT	USE	36	VPT	USE			
15	TIMER	USE	37	RED	USE			
16	4	USE	38	GREEN	USE			
17	5	USE	39	YELLOW	USE			
18	6	USE	40	BLUE	USE			
19	CHANNEL+	USE	41	ERASE	USE			
20	■ STOP	USE	42	AUDIO	USE			
21	SPEED-	USE	43	TEXT	USE			
22	CHECK	USE	44	CODE ¦ REVEAL	USE			

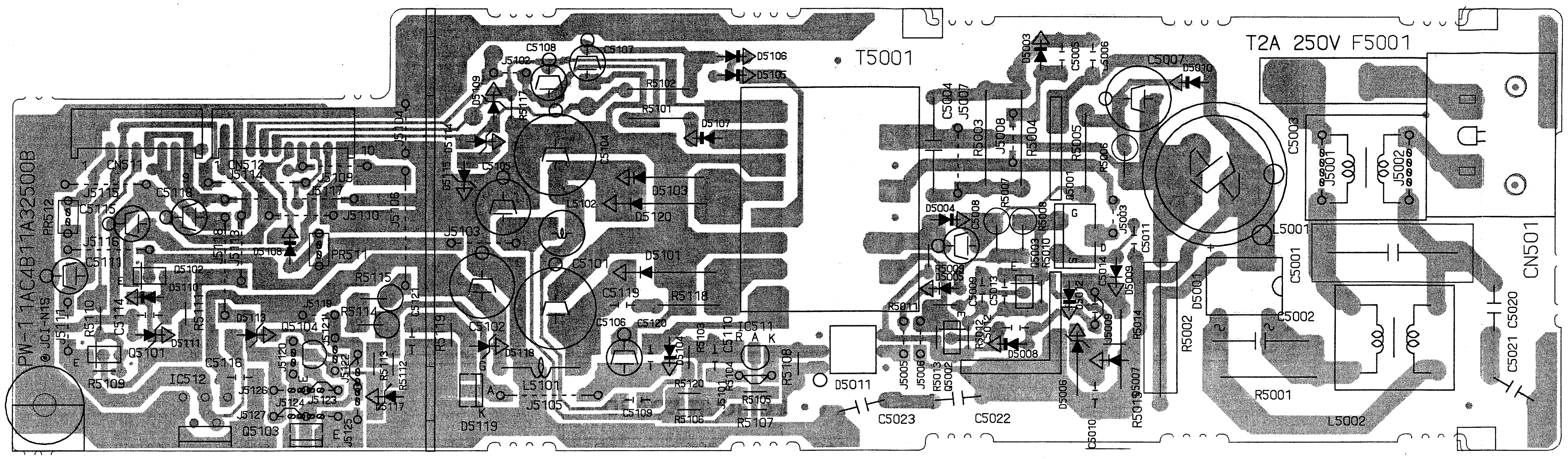
IR-07926-ITT

2-28. CP-1 CIRCUIT BOARD

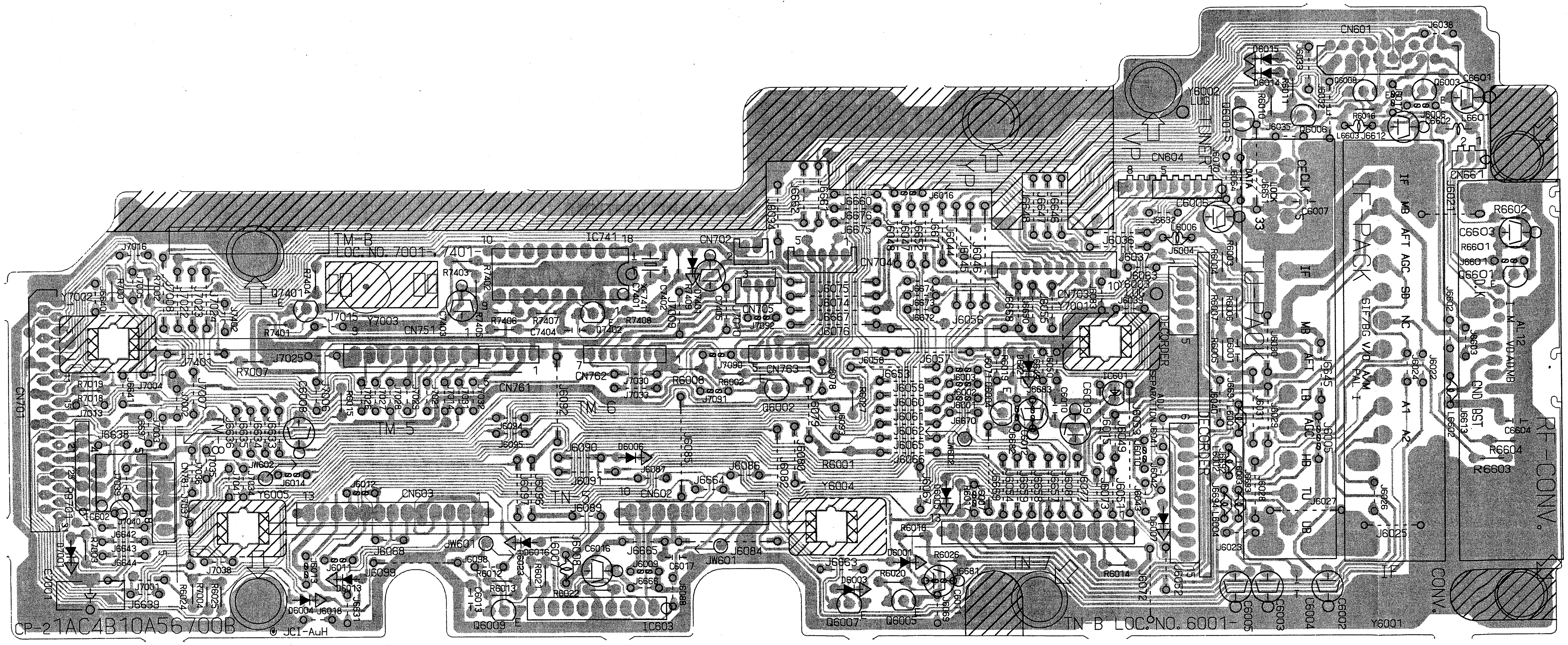


J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
VD-2
VD-1
CN852
CN851
CN164
CN354
CN352
CN350
CN302
CN303
CN306
CN304
CN351
CN252
CN253
CN201
IC352
IC391
IC303
IC301
IC231
IC261
IC262
IC234
IC201
TP151
TP101
TP351
TP352
VR151
VR152
VR351
VR353
VR354
VR201
SP-SLOW
LP-SLOW
SW-P
LOC NO. 1001
COMPL PCB, VD-A
NICAM
L-PB
R-PB
CP-1
1AC4B11A32300C
JCI-N1S
DIP
NORMAL LINE OUT
BIAS
AD-A
LOC. NO 2001
SY-A Lo. 3000
Y6602
Y6603
Y6601

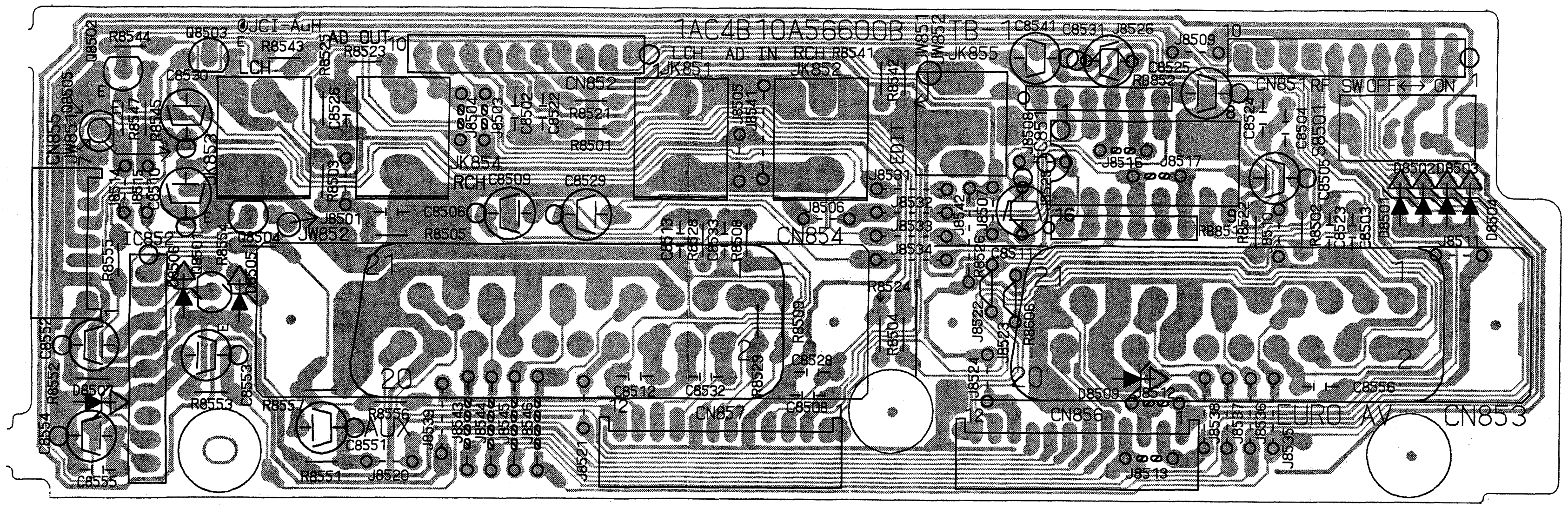
2-29. PW-1 CIRCUIT BOARD


T2A 250V F5001
T5001
CN501
PW-1 1AC4B11A32500B
JC1-N15
L5001
L5002
R5001
C5020
C5021
C5022
C5023
D5011
IC511
IC512
Q5101
Q5103
D5119
L5101
J5105

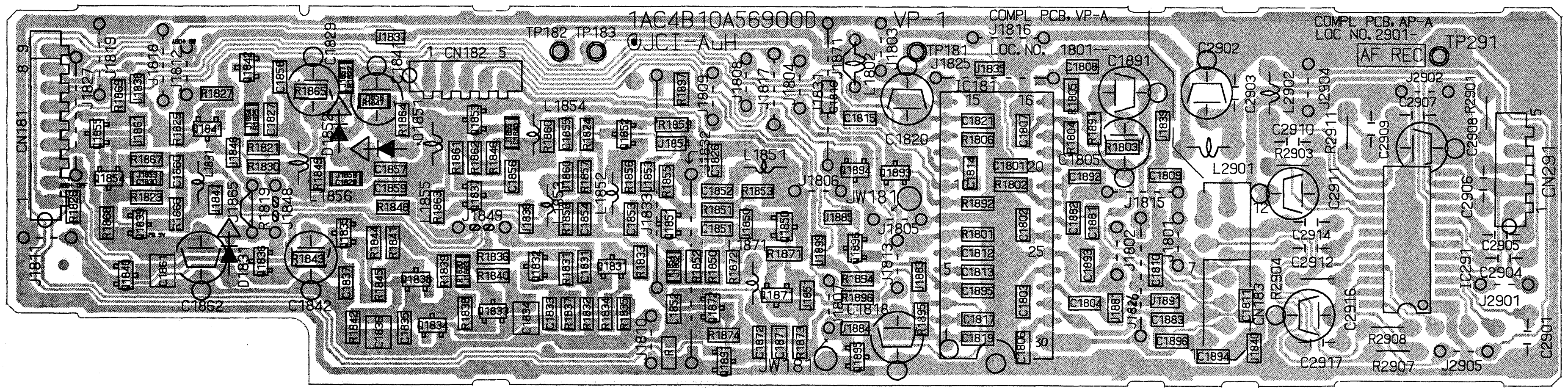
2-30. CP-2 CIRCUIT BOARD


CP-2 1AC4B10A56700B
JC1-AuH
TM-B LOC. NO. 7001~7401~
TN-B LOC. NO. 6001~
IC741
IC603
CN601
CN602
CN603
CN604
CN661
CN701
CN702
CN703
CN704
CN705
CN751
CN761
CN762
CN763
TUNER
IF PACK
RF-CONV.
DECORDER
SEPARATION
TM-5
TM-6
TN-5
Y6004
Y7003
Y6001
Y6002

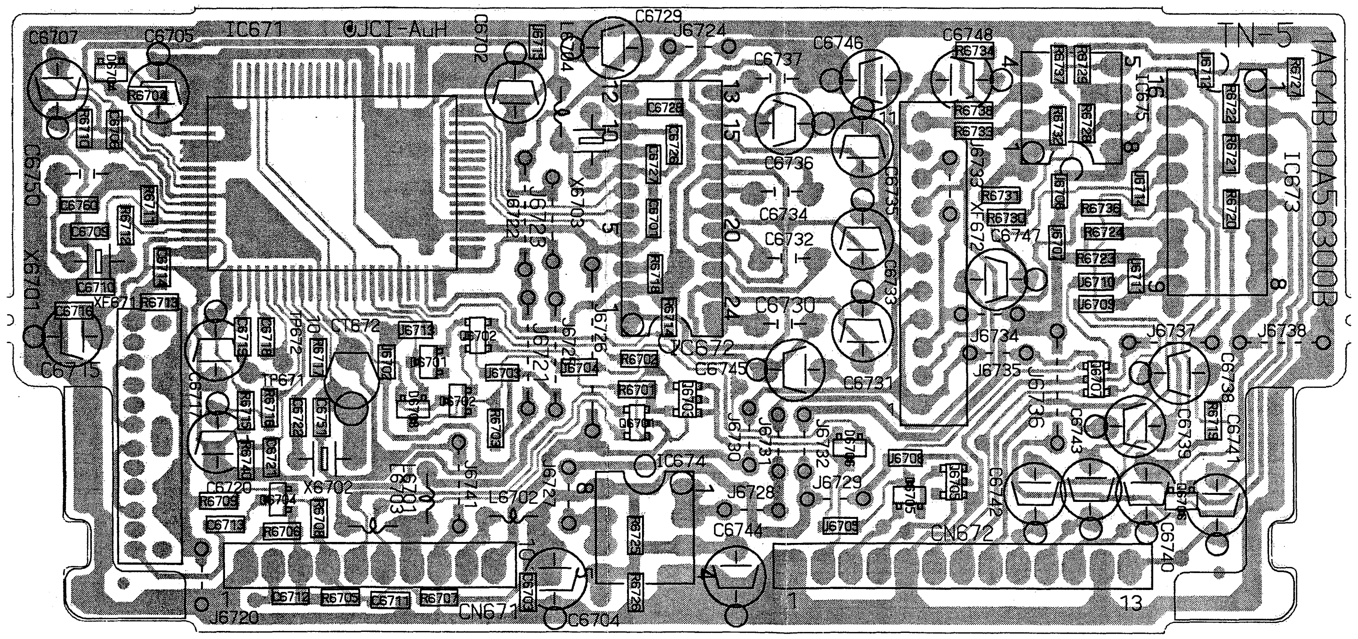
2-31. TB-1 CIRCUIT BOARD


1AC4B10A56600B TB-1
JCI-AuH
AD OUT
LCH
AD IN
RCH
JK851
JK852
JK853
JK854
JK855
CN851 RF SW OFF ↔ ON
CN852
CN853
CN854
CN855
CN856
CN857
AUX
EURO AV

2-32. VP-1 CIRCUIT BOARD


1AC4B10A56900D VP-1
JCI-AuH
COMPL PCB, VP-A
LOC. NO. 1801--
COMPL PCB, AP-A
LOC NO. 2901-
AF REC
TP291
TP181
TP182
TP183
IC181
IC291
CN181
CN182
CN291
L1854
L2901

2-33. TN-5 CIRCUIT BOARD (OPTION)


TN-5
1AC4B10A56300B
JCI-AuH
IC671
IC672
IC673
IC674
CN671
CN672
X6701
X6702

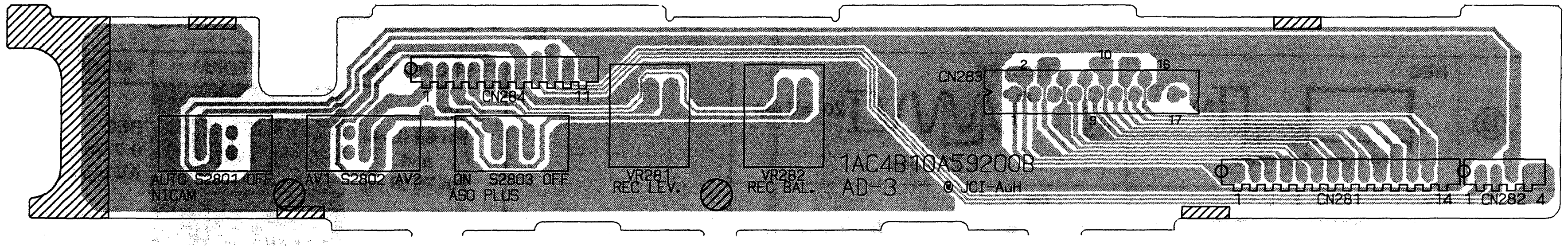
K

J

I

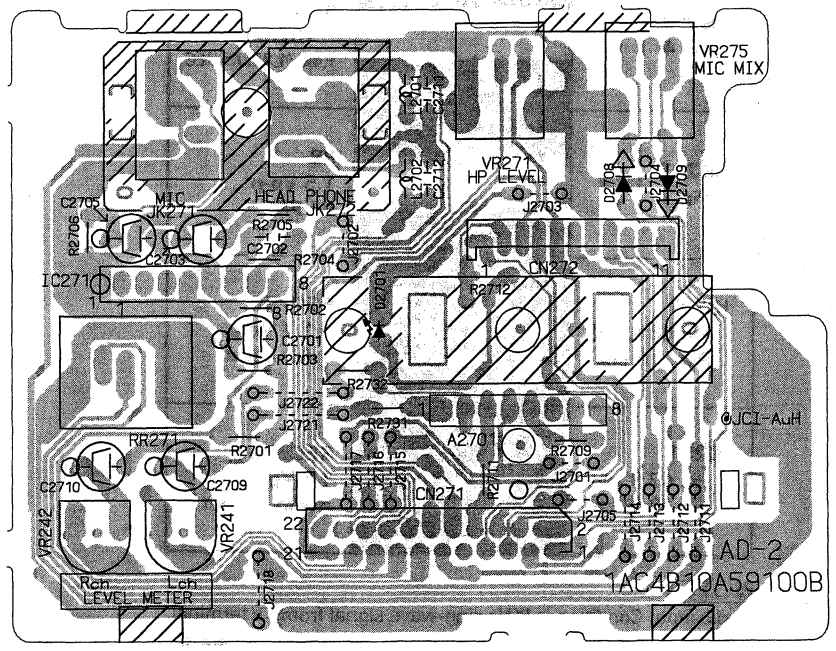
H

2-34. AD-3 CIRCUIT BOARD

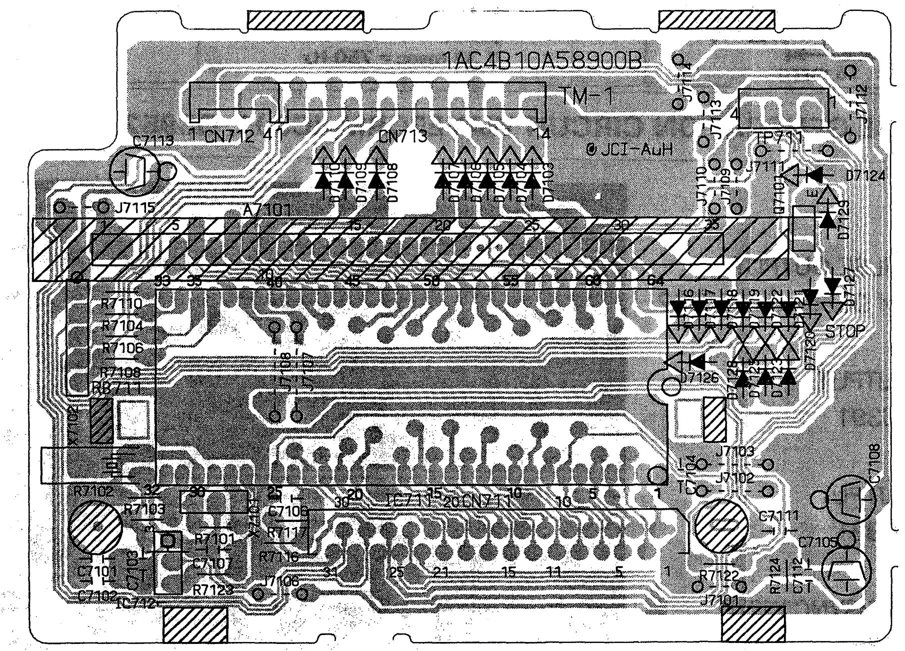

CN284
CN283
VR281
REC LEV.
VR282
REC BAL.
AUTO S2801 OFF
NICAM
AV1 S2802 AV2
ON S2803 OFF
ASO PLUS
1AC4B10A592008
AD-3
© JCI-AuH
CN281
CN282

G

2-35. AD-2 CIRCUIT BOARD


VR275
MIC MIX
VR271
HP LEVEL
MIC
JK271
HEAD PHONE
JK272
IC271
CN272
CN271
A2701
RR271
VR242
VR241
Rch
Lch
LEVEL METER
©JCI-AuH
AD-2
1AC4B10A59100B

2-36. TM-1 CIRCUIT BOARD


1AC4B10A58900B
TM-1
CN712
CN713
©JCI-AuH
A7101
IC711
CN711
STOP

F

E

D

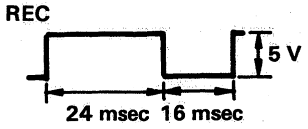
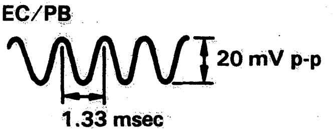
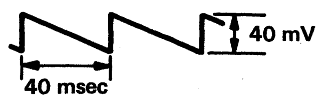
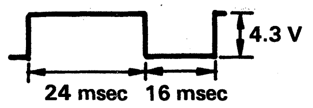
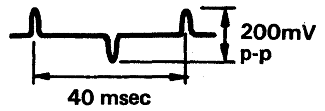
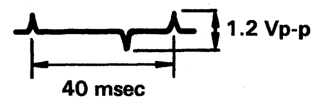
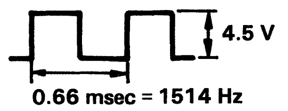
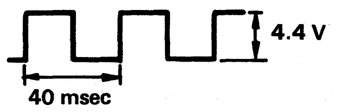
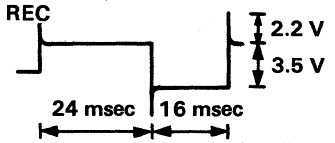
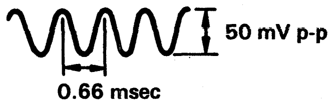
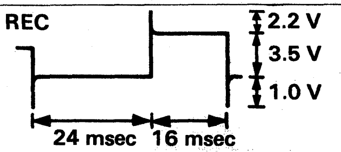
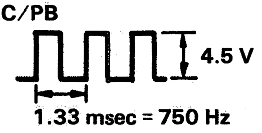
C

B

A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

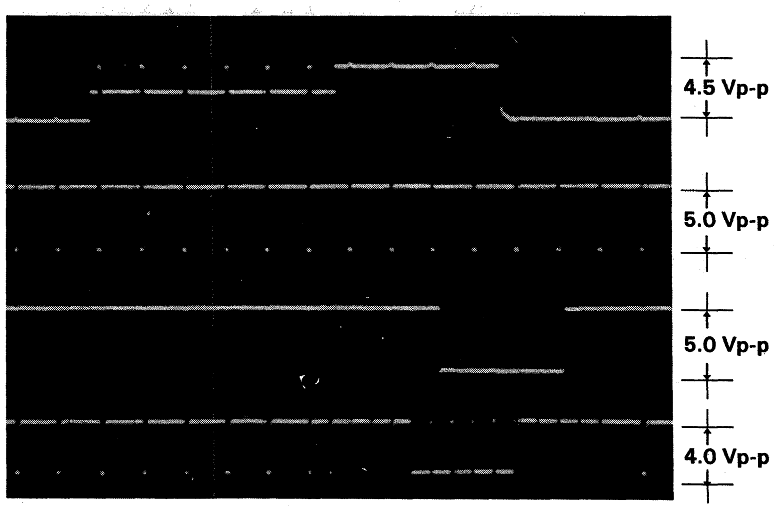
2-37. WAVEFORM OF SERVO

	IC352 (LA7124 or LA7123)	⑫	REC  5 V 24 msec 16 msec	㉘	REC/PB  20 mV p-p 1.33 msec
③	P.B.  40 mV 40 msec	⑮	PB  4.3 V 24 msec 16 msec	㉙	PB  200mV p-p 40 msec
④	P.B.  1.2 Vp-p 40 msec	㉓ ㉖	REC/PB  4.5 V 0.66 msec = 1514 Hz	㉚	REC/PB  4.4 V 40 msec
⑦	REC  2.2 V 3.5 V 24 msec 16 msec	㉔ ㉕	REC/PB  50 mV p-p 0.66 msec		
⑧	REC  2.2 V 3.5 V 1.0 V 24 msec 16 msec	㉗	REC/PB  4.5 V 1.33 msec = 750 Hz		

V-LOCK PULSE GENERATION CIRCUIT WAVEFORM (IC391, Q3952, Q3953, D3951, D3952)

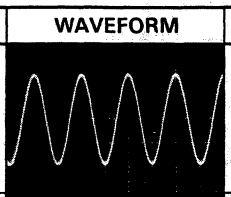
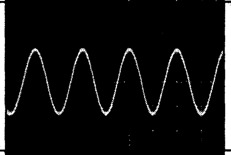
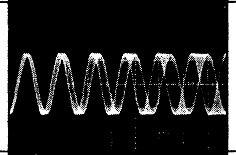
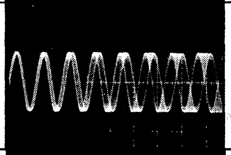
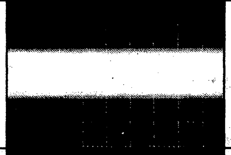
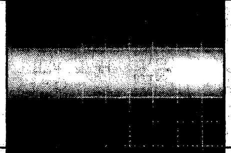
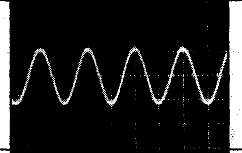
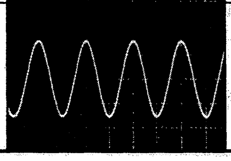
[STILL Mode]

1. V-LOCK PULSE OUTPUT
   - Cathode of D3951 and D3952
2. H-SYNC OUTPUT
   - Pin 2 of IC391
3. V-SYNC OUTPUT
   - Pin 4 of IC391
4. COMPOSITE SYNC INPUT
   - Pin 6 of IC391



WF-S-VP

2-38. WAVEFORM OF AUDIO

TEST LOCATION	WAVEFORM	MODE/LEVEL
IC201 Pin 68 (L ch) and Pin 78 (R ch)		REC 0.7 Vp-p AV Input
IC201 Pin 42 (L ch) Pin 23 (R ch)		REC 0.5 Vp-p Modulation Level
IC201 Pin 38 L ch		REC 1.2 Vp-p 1.4MHz Carrier
IC201 Pin 28 R ch		REC 1.2 Vp-p 1.8 MHz Carrier
CN202 Pin 4		REC 100m Vp-p 1.4M/1.8M AF REC
CN202 Pin 3		PB 1.5 Vp-p AF PB
IC201 Pin 56 (L ch) Pin 9 (R ch)		REC/PB 1.1 Vp-p AD Level
IC201 Pin 47 (L ch) Pin 20 (R ch)		REC/PB 1.5 Vp-p Audio Output

NOTE:
Audio input Condition is 1KHz sine-wave signal from AV terminal.

WF-A2

2-39. IC301 SYSTEM CONTROL & DIGITAL SERVO MPU PIN FUNCTIONS TABLE

No.	Name	I/O	I/O Signal Function
1	D-PG	I	Drum PG pulse input.
2	S-DATA IN	I	Terminal for communication of mode data with other microprocessors.
3	S-DATA OUT	O	Data is 8bitX12 block serial data.
4	SSB CLCK	O	The clock pulse is output from this microprocessor.
5	INSERT ON/OFF	I	Insert function ON/OFF terminal.
6	ENV SW	I	Video head selection signal (PB envelop detection signal) input for 4-head special playback.
7	DOC	I	Drop out detection pulse input. Used for absorbing STILL noise.
8	C-FG 2.	I	Capstan motor FG-2 signal input. Used for brake timing control at slow mode.
9	C-FG 1.	I	Capstan motor FG-1 signal input. (Capstan speed control)
10	D-FG	I	Head drum motor FG signal input. (Drum speed control)
11	PB CTL P.	I	CTL head playback pulse input.
12	COMP SYNC	I	Composite sync signal input.
13	RF SW P.	O	Output of RF switching pulse created by head drum PG.
14	AF SW P.	O	Output of Hi-Fi (FM) audio head switching pulse created by head drum PG.
15	VD P	O	Dummy VD (V LOCK) pulse output at special playback mode.
16	REC CTL	O	Recording control (CTL) signal output.
17	DRUM PWM	O	Head drum motor rotation (speed/phase) control signal output. (Signal as Pulse Width Moduration)
18	CAP PWM	O	Capstan motor rotation (speed/phase) control signal output. (Signal as Pulse Width Moduration)
19	A-VSS	-	Ground terminal for internal A/D converter.
20	AV REF	I	Reference voltage input for internal A/D converter.
21	AF ENV	I	Hi-Fi (FM) audio head envelope detection signal input for ATR function.
22	VD ENV	I	Video head envelope detection signal input for ATR function.
23	D-PG MM	I	CR for drum PG pulse delay. (Head switching position adjustment.)
24	SLOW TRK CR	I	CR for slow tracking adjustment.
25	DEW S.	I	Dew sensor input terminal.
26	OPTION	I	Terminal to alter internal specifications. (Set up input voltage: 0V for 2Head / 1.2V for 3Head / 5V for 4Head models)
27	T.TOP S.	I	Sensor signal input for tape beginning detection.
28	T.END S.	I	Sensor signal input for tape end detection.
29	RESET	I	Initial reset terminal for this IC.
30	VDD	-	IC power supply input. (5Vdc)
31	X2	-	IC clock OSC terminal. Frequency is 12MHz.
32	X1.	-	
33	VSS	-	Ground terminal
34	H AMP SW	O	Video head amplifier (SP/LP head or SUB head) selection signal output. (4/3 HEAD models)
35	ROTARY	O	Chroma phase control signal output for 4/3 head models.
36	VD REC	O	Recording indication signal. Used for equiped rotary erase head models.
37	SLOW+STILL	O	Output signal indicating SLOW/STILL modes.
38	CTL GAIN DOWN	O	CTL head AMP gain control signal output.
39	-	-	
40	CAP F/R	O	Capstan motor forward/revers control.
41	DRUM P	O	Outputs the drum jitter compensation in the slow mode.
42	CAP STR/STP	O	Outputs the capstan motor start and brake pulses in the slow mode.
43	REMARK	O	Output the control (CTL) signal re-recording control signal. Three-value output (H, M, L).
44	FE CTL	O	Output the rotary erase head ON/OFF control.
45	ANT/VIDEO	O	Antenna through or video deck RF output select (Video when LOW).
46	AF REC	O	Hi-Fi (FM) audio head recording timing control signal.
47	LP H	O	"HIGH" output when tape speed is set to LP mode.
48	POWER UP	O	"HIGH" output except when power is off. Indicating that power is ON.
49	SPECIAL PB	O	Output in special playback modes (R/F-SEARCH, STILL and SLOW).
50	PB H	O	Signal indicating playback mode.
51	REC	O	Signal indicating recording mode.
52	INPUT SEL. V	O	Signal for selecting video input signal.
53	INPUT SEL. A	O	Signal for selecting audio input signal.
54	NORMAL/HIFI	O	Signal for selecting normal audio and Hi-Fi audio signal.
55	ST/L/R	O	Signal for selecting audio output signal (STEREO / Lch / Rch / NORMAL).
56	A.DUB	O	Signal indicating audio dubbing mode.
57	A MUTE	O	Signal disable Hi-Fi audio signal output.
58	A REC MUTE	O	Signal disable normal audio signal output.
59	A NOR REC	O	Signal indicating normal audio recording.
60	A NOR PB	O	Signal indicating normal audio playback.
61	ML-M	O	Loading motor rotation speed (medium speed) indication signal.
62	ML-L	O	Loading motor rotation speed (low speed) indication signal.
63	ML-R	O	Loading motor rotation direction (REV) indication signal.
64	ML-F	O	Loading motor rotation direction (FWD) indication signal.
65	FF+REW	O	Signal indicating FF or REW modes.
66	STLL+SLW2	O	Drop out pulse width selection signal output to DOC circuit.
67	VSS	-	IC ground terminal.
68	-	I	Normaly pull-up 5Vdc.
69	SP/LP	O	"LOW" output when tape speed is set to SP mode. "HIGH" is set to LP mode.
70	EDIT IN	I	Edit mode control terminal.
71	SW DATA 0	I	3-bit data indicating operation position of mechanism.
72	SW DATA 1	I	
73	SW DATA 2	I	
74	FL-START SW	I	Switch input indicating start of cassette loading or discharge by cassette mechanism.
75	SAFETY SW	I	Input terminal for accidental erasur prevention switch. No operation to recording mode while "LOW" is input.
76	-	-	
77	VDD	-	IC power supply terminal. (5Vdc)
78	T.REEL P.	I	Pulse input for detection of take-up reel table rotation.
79	S.REEL P.	I	Pulse input for detection of supply reel table rotation.
80	AV CTL	O	AV terminal (pin8 of 21pin AV socket) control signal output.

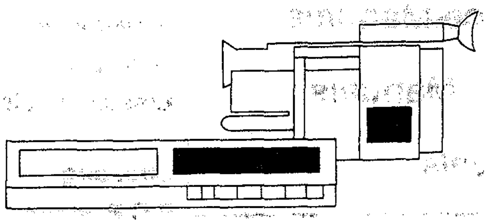
VP4H91SA

2-40. IC711 (M50959) TIMER MPU PIN FUNCTIONS TABLE

No.	Name	I/O	I/O Signal Function
1	VDD	-	IC power supply input. (5 Vdc)
2	TEXT TXD	O	Data output (TXD) terminal fof VIDEOTEXT decoder unit .
3	TEXT RXD	I	Data input (RXD) terminal for VIDEOTEXT decoder unit .
4	PLL CLOCK	O	PLL tuning DATA , CLOCK and CE (enable) signal output to tuner / IF unit.
5	PLL DATA	O	
6	PLL CE	O	
7	BILINGUAL	I	Audio transmission system indication signal (BILINGUAL) input from decoder circuit.
8	COMMON CLK	O	Terminal for communication of respective data with E2PROM IC, OSD IC or tuning PLL IC.
9	COMMON DATA	I/O	The clock pulse is output from this microprocessor.
10	E2PROM CS	O	E2PROM access (enable) signal output.
11	PAL / SECAM	O	-
12	CH +	O	CH+ terminal control signal output.
13	STEREO	I	Audio transmission system indication signal (STEREO) input from decoder circuit.
14	AUDIO MUTE	O	"H" output (Audio Signal Mute) during tuning period.
15	VIDEO MUTE	O	"H" output (Video Signal Mute) during tuning period.
16	TEXT CLK	O	Clock signal output to VIDEOTEXT decoder unit .
17	SSB CLK	I	Terminal for communication of mode data with other MPU.
18	SSB SDA OUT	O	The clock pulse is input from system control MPU.
19	SSB SDA IN	I	Data is 8bit X 12 block serial data.
20	AFT C	I	AFT S-curve input terminal.
21	SD (H SYNC)	I	Horizontal sync detection signal input for exsistence channel discrimination.
22	VPS SCL	O	Clock shignal for VPS decoder IC.
23	VPS SDA	I/O	Data exchange with the VPS decoder IC.
24	POWER FAIL	I	Power failuer mode set at "L" input.
25	IR SIG.	I	Remote control signal input.
26	VSS	-	IC Ground terminal.
27	RESET	I	Initial reset terminal for this IC. Reset when "LOW".
28	X IN	-	IC clock OSC terminal.
29	X OUT	-	Frequency is 6 MHz.
30	XC IN	-	IC clock OSC used in the power failure mode.
31	XC OUT	-	Frequency is 32.768 kHz.
32	VSS	-	IC Ground terminal.
33	-	-	-
34	KEY IN 4	I	Operation key data inputs.
35	KEY IN 3	I	
36	KEY IN 2	I	
37	KEY IN 1	I	
38	Vpp	I	- 30 V input for display (FLD) drive.
39	-	-	-
40	SEG p	O	Display segment outputs (FLD). (Included key-scan output)
41	SEG o	O	
42	SEG n	O	
43	SEG m	O	
44	SEG l	O	
45	SEG k	O	
46	SEG j	O	
47	SEG i	O	
48	G9	O	Display grid outputs (FLD).
49	G8	O	
50	G7	O	
51	G6	O	
52	G5	O	
53	G4	O	
54	G3	O	
55	G2	O	
56	G1	O	
57	SEG h	O	Display segment outputs (FLD). (Included key-scan output)
58	SEG g	O	
59	SEG f	O	
60	SEG e	O	
61	SEG d	O	
62	SEG c	O	
63	SEG b	O	

TMVP_FVT

NOKIA
CONSUMER ELECTRONICS



VR

1991

NOKIA UNTERHALTUNGSELEKTRONIK GmbH
Service, Östliche 132, Postfach 1526
D-7530 Pforzheim

Service-Manual

NOKIA

NOKIA 3782 HIFI VPS
NOKIA 3782 HIFI NICAM
NOKIA 3782 HIFI UK

Luxor

LUXOR 4762 HIFI NICAM

Ⓓ Elektrischer Abgleich

Schaltbilder, Leiterplatten, Ersatzteile-Liste und Mechanik-Justagen, siehe Rückseite

⚠ **Sicherheitsbauteil!**
Dieses Symbol kennzeichnet in den Schaltbildern alle Bauteile, die nur durch Originalteile ersetzt werden dürfen.

Bei Reparaturen gültige Sicherheitsvorschriften beachten!

(GB) Electrical alignment

Circuit diagrams, P.C.B., spare parts list and mechanical adjustments, see rear page

⚠ **Safety Component!**
This symbol identifies in the circuit diagrams all safety critical parts. Replace only with specified part numbers.

Service and repair work to be performed only in accordance with existing safety regulations!

Ⓕ Alignement

Schémas, circuits imprimés, liste des pièces détachées et mécanique ajustages, voir page précédante

⚠ **Composant de protection!**
Ce symbol indique tous les composants dans les schémas, qui doivent être remplacés uniquement par des pièces d'origines.

Pendant le dépannage respecter les régulations du sécurité!

Änderungen vorbehalten Modifications reserved Modifications réservées		**6611 76 02** (801) SA

Liste der Service-Manuale Liste of Service Manuals Liste des manuals Modell Model Modèle	Schaltbilder, Leiterplatten, Ersatzteile-Liste Circ. dirgr., P.C.B.,spare parts list Schémas circ. imprimés, liste des pièces détachées No.	Elektrischer Abgleich Electrical alignment Alignement No.	Mechanik-Justagen Mechanical adjustments Mécanique ajustages No.
NOKIA 3702 VPS NOKIA 3702 NOKIA 3702 H NOKIA 3722 UK NOKIA 3722 IR	6611 77 83	6611 77 84	6611 77 85 and 6611 77 06
NOKIA 3722 VPS NOKIA 3722	6611 77 86		
SCHAUB LORENZ 4722 VPS SCHAUB LORENZ 4722 LUXOR 4722 N	6611 77 87		
NOKIA 3732 VPS NOKIA 3732	6611 77 88	6611 77 89	
NOKIA 3742 VPT	6611 77 90	6611 77 91	
NOKIA 3742 VPS NOKIA 3742 NOKIA 3742 UK	6611 77 92		
SCHAUB LORENZ 4742 VPS SCHAUB LORENZ 4742 LUXOR 4742 N	6611 77 93		
OCEANIC 5702 S OCEANIC 5722 S	6611 77 94	6611 77 95	
OCEANIC 5742 MS	6611 77 96	6611 77 97	
OCEANIC 5752 MS	6611 77 98	6611 77 99	
NOKIA 3782 HIFI VPS	6611 76 01	6611 76 02	
NOKIA 3782 HIFI NICAM NOKIA 3782 HIFI UK LUXOR 4762 HIFI NICAM	6611 76 03		

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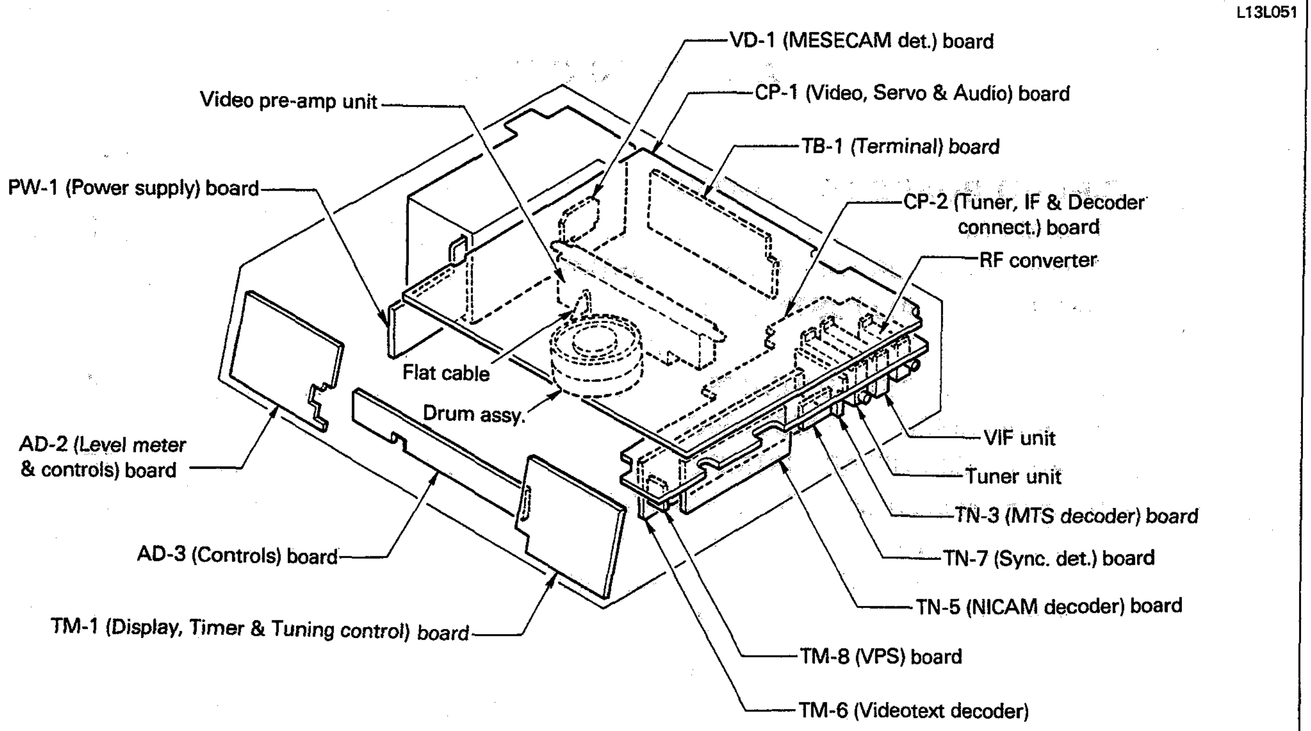
1. CIRCUIT BOARD LOCATIONS

1-1. MAIN BOARDS


L13L051
VD-1 (MESECAM det.) board
CP-1 (Video, Servo & Audio) board
Video pre-amp unit
TB-1 (Terminal) board
PW-1 (Power supply) board
CP-2 (Tuner, IF & Decoder connect.) board
RF converter
Flat cable
Drum assy.
AD-2 (Level meter & controls) board
VIF unit
Tuner unit
TN-3 (MTS decoder) board
AD-3 (Controls) board
TN-7 (Sync. det.) board
TN-5 (NICAM decoder) board
TM-1 (Display, Timer & Tuning control) board
TM-8 (VPS) board
TM-6 (Videotext decoder)

Installed specific equipment and models
TM-6 (Videotext decoder) board: Optional on all the model.
TM-8 (VPS) and TN-3 (MTS decoder) board: NOKIA 3782 HIFI VPS only.
VD-1 (MESECAM dec.) board: Except NOKIA 3782 HIFI UK.
TN-5 (NICAM decoder) board: Except NOKIA 3782 HIFI VPS.

Fig. 1-1

1-2. LOCATION FOR TAPE PATH ADJUSTMENT

NOTE: Test point TP182 and TP183 for tape path adjustment is shown in figure below.
For adjustment, refer to the separate volume "Mechanical adjustment 6611 77 06".

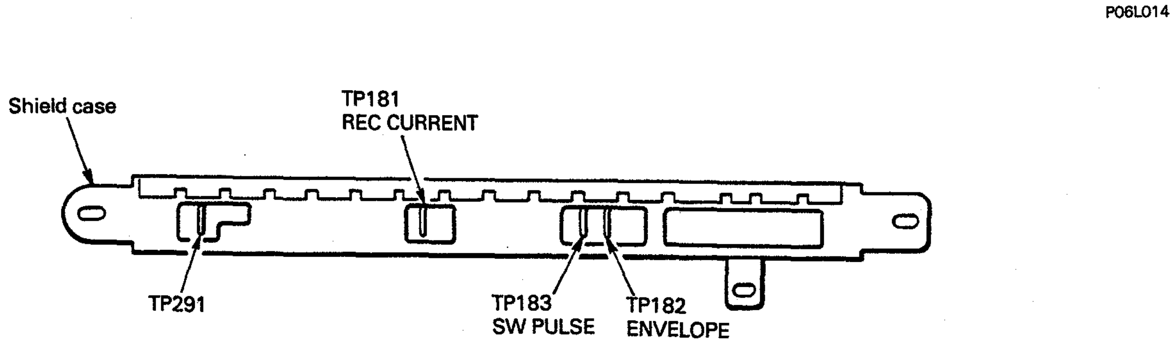

P06L014
Shield case
TP181
REC CURRENT
TP291
TP183
SW PULSE
TP182
ENVELOPE

Fig. 1-2 Pre-amp unit

2. ELECTRICAL ADJUSTMENT

2-1. PREPARATION

2-1-1. EQUIPMENT

- Colour TV monitor
- PAL Colour-bar generator (with RF and LINE OUTPUT)
- PAL TV test signal generator (Multi-burst signal with colour burst)
- Audio signal generator
- Oscilloscope (dual trace; frequency response: 10MHz or more; probe: 10:1)
- Frequency counter (countable to 10MHz or higher)
- Digital voltmeter
- AC voltmeter
- In/output probes
- Alignment cassette (VHJ-0008) PAL Colour bar 1KHz
- Alignment cassette (VHJ-0009) Monoscope 6KHz
- Alignment cassette (VHJ-0051) Check for D.O.C.
- Alignment cassette (VHJ-0023) PAL Monoscope 6KHz, PAL Colour-bar 1KHz, SECAM Colour-bar 1KHz, PAL RF Sweep MESECAM Colour-bar 1KHz, NTSC Colour-bar 1KHz.
- Alignment cassette (VHJ-0080) PAL colour bar HiFi BPF
- Alignment cassetee (VHJ-0020) AF level colour bar 1KHz
- Relay jig (VHJ-0067) 12-wire cable for Pre-amp unit
  Connect the Flat cable end from the Drum assembly to the Pre-amp unit using the Relay jig to provide simple repairing and adjustment of the Pre-amp unit, as shown in Fig. 2-1-1. Further, when adjusting the Pre-amp unit, be sure to make contact an end of Shield case with Bracket of the Pre-amp unit to maintain the shield effect.
- Relay jig (VHJ-0088) for AD-2 board
  Connect the Flat cable end to CN251 of the CP-1 board and other end to CN271 of the AD-2 board using the Relay jig (Shown in Fig. 2-1-2) to provide simple repairing and adjustment of the AD-2 board.

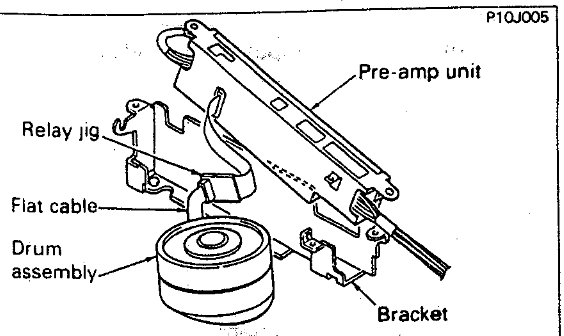


Fig. 2-1-1

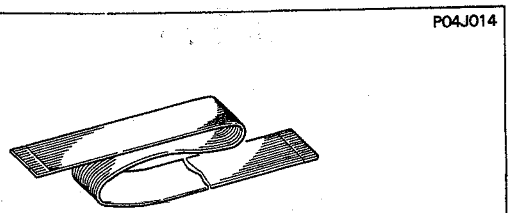


Fig. 2-1-2

2-1-2. SET-UP

Because the RF input signal is used for circuit adjustments, connect the colour-bar generator to the ANT IN terminal of the VCR. The RF input signal is processed by the tuner and IF circuit. It is important that the video output signal of the IF circuit satisfies the items shown in Fig. 2-1-3. Connect the oscilloscope to the VIDEO OUTPUT terminal of the video circuit and terminate with a 75Ω load, and then check the video output signal.

- The amplitude of the sync signal should be approximately 0.3 Vp-p.
- The amplitude of the video signal should be approximately 0.7 Vp-p.
- While observing the oscilloscope or TV screen, make fine-tuning adjustments so that the colour burst amplitude is approximately 0.3 Vp-p.
- Check to be sure that there is no spike noise in the sync part of the horizontal sync signal.

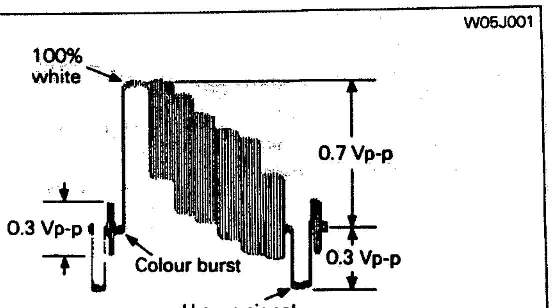
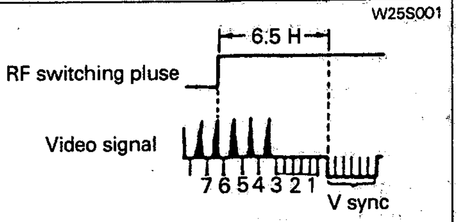
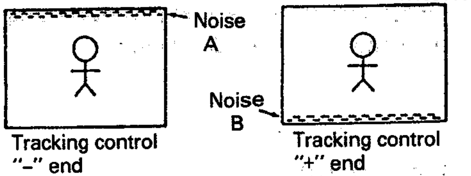


Fig. 2-1-3

2-2. SERVO CIRCUIT ADJUSTMENT ..... CP-1 board and VP-1 Pre-amp unit

NOTE (1) : These adjustments should be carried out upon completion of the transport adjustments.
(2) : If the tape transport adjustments are carried out after these adjustments, follow the procedures again in SWITCHING POSITIONS.

No.	Item	Input	Mode	Point	Location	Remark
1	SWITCHING POSITION	Alignment cassette (VHJ-0009 or VHJ-0023)	PLAY	VIDEO OUTPUT TP101 RF SW pulse TP351 (CP-1 board)	VR351	 W25S001 6.5 H RF switching pluse Video signal 7 6 5 4 3 2 1 V sync 1. Turn VR351 fully clockwise (seeing from the foil side) in the STOP mode. 2. Set the tracking control position to the center. (Tracking center position display in the indicator panel "T —:— ") 3. Play back the test tape and adjust VR351 so that the phase of the leading edge of the vertical sync signal is delayed 6.5 ± 0.5 H from the rise of the RF switching pulse waveform. 4. If the adjustment value does not changed by adjustment, repeat steps 1 through 3.
2	STILL V-LOCK for SP MODE	Colour bar from Colour bar generator	REC (SP) ↓ PLAY (SP) ↓ STILL (SP)	TV screen	Tracking control buttons (Front panel)	1. Put the VCR in the REC (SP) mode and record at the middle of the cassette tape. 2. Playback the recorded part, and put the VCR in the STILL (SP) mode. 3. Press the (+) or (–) tracking control buttons until V jitter (very fine movement of the vertical sync) is minimized.
3	SLOW TRACKING for SP MODE	Colour bar from Colour bar generator	REC (SP) ↓ PLAY (SP) ↓ SLOW (SP)	TV screen	VR353	 W15S008 Noise A Noise B Tracking control "–" end Tracking control "+" end 1. Put the VCR in the REC (SP) mode and record at the middle of the cassette tape. 2. Playback the recorded part, and VCR in the SLOW (SP) mode by remote control unit and the ASO plus switch to ON. 3. Press the tracking control (+) (–) buttons simultaneously to the center position. (on the display "T —:— ") 4. Turn VR353, and move the noise out of the TV screen, while watching to the screen. 5. The noise position at which noise begins to appear at the upper edge of the TV screen is A, when the tracking control is turned to the "–" end. 6. The noise position at which noise begins to appear at the lower edge of the TV screen is B, when the tracking control is turned to the "+" end. 7. Readjust VR353 so that the same level of noise A and noise B can be obtained.

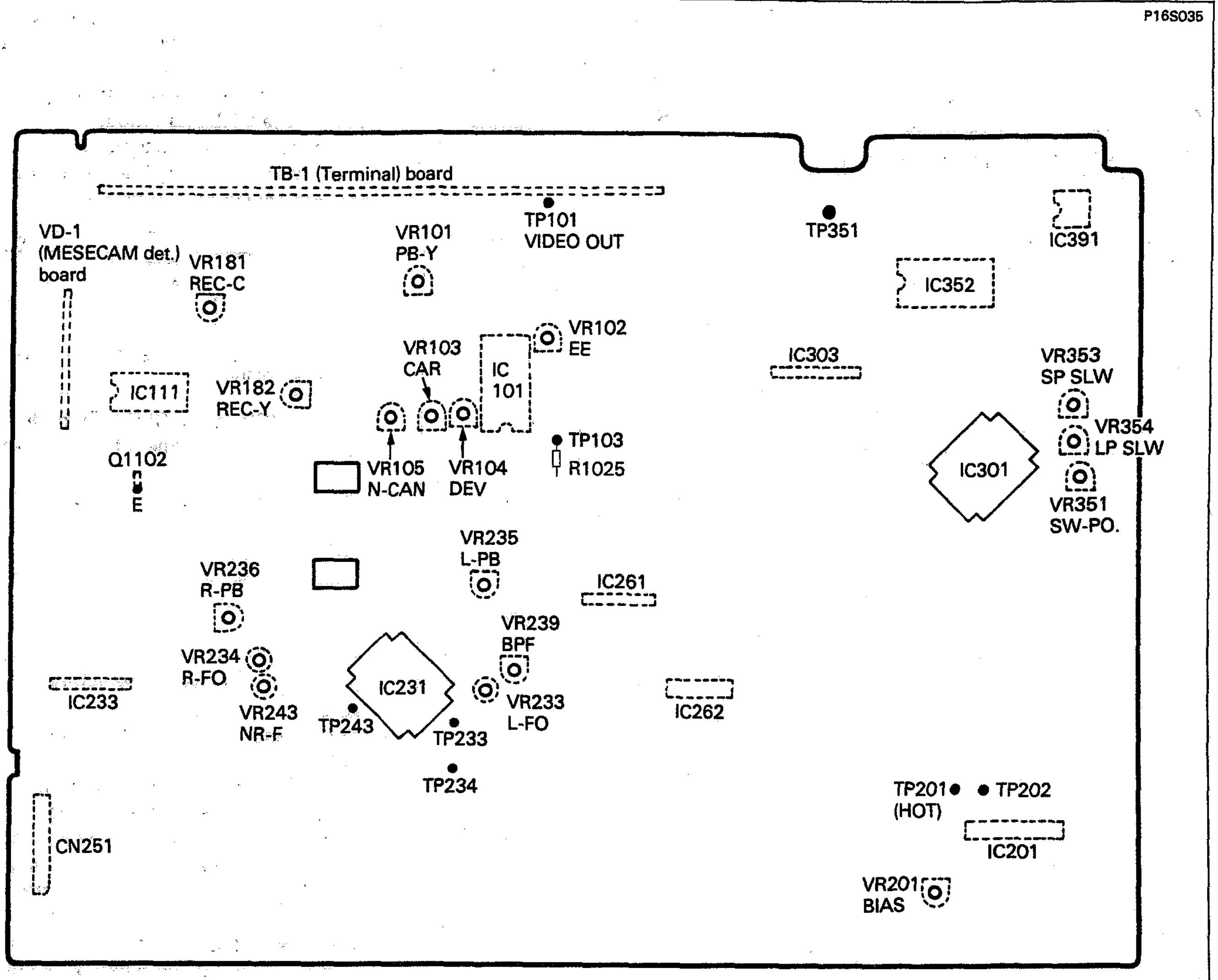
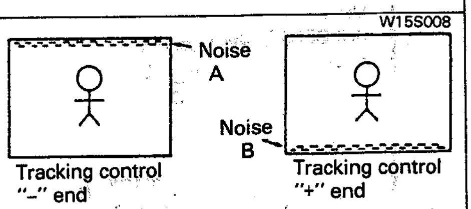
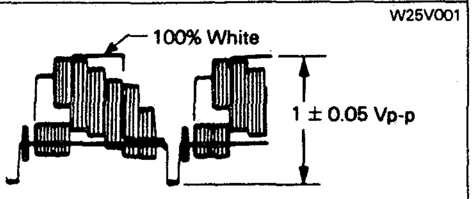
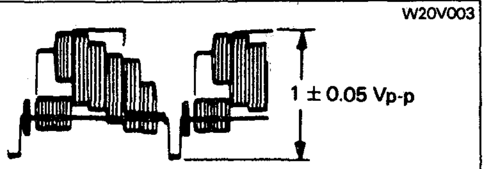
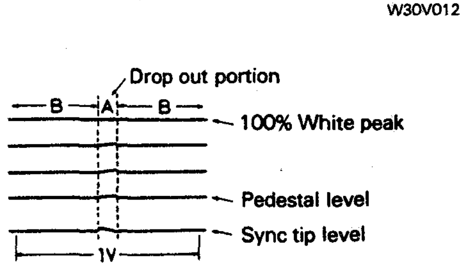
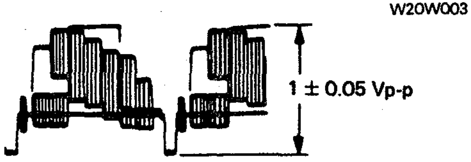

P16S035
TB-1 (Terminal) board
TP101
VIDEO OUT
TP351
IC391
VD-1
(MESECAM det.)
board
VR181
REC-C
VR101
PB-Y
IC352
VR102
EE
VR103
CAR
IC
101
IC303
VR353
SP SLW
IC111
VR182
REC-Y
VR354
LP SLW
TP103
R1025
IC301
Q1102
E
VR105
N-CAN
VR104
DEV
VR351
SW-PO.
VR235
L-PB
VR236
R-PB
IC261
VR239
BPF
VR234
R-FO
IC233
VR243
NR-F
IC231
TP243
TP233
VR233
L-FO
IC262
TP234
TP201
(HOT)
TP202
IC201
CN251
VR201
BIAS

Fig. 2-2-1 CP-1 board (Foil side view)

No.	Item	Input	Mode	Point	Location	Remark
4	STILL V-LOCK for LP MODE	Colour bar from Colour bar generator	REC (LP) ↓ PLAY (LP) ↓ STILL (LP)	TV screen	Tracking control buttons (Front panel)	1. Put the VCR in the REC (LP) mode and record at the middle of the cassette tape. 2. Playback the recorded part, and put the VCR in the STILL (LP) mode. 3. Press the (+) or (–) tracking control buttons until V jitter (very fine movement of the vertical sync) is minimized.
5	SLOW TRACKING for LP MODE	Colour bar from Colour bar generator	REC (LP) ↓ PLAY (LP) ↓ SLOW (LP)	TV screen	VR354	 W15S008 Noise A Noise B Tracking control "–" end Tracking control "+" end 1. Put the VCR in the REC (LP) mode and record at the middle of the cassette tape. 2. Playback the recorded part, and VCR in the SLOW (LP) mode by remote control unit and the ASO plus switch to ON. 3. Press the tracking control (+) (–) buttons simultaneously to the center position. (on the display "T —:— ") 4. Turn VR354, and move the noise out of the TV screen, while watching to the screen. 5. The noise position at which noise begins to appear at the upper edge of the TV screen is A, when the tracking control is turned to the "–" end. 6. The noise position at which noise begins to appear at the lower edge of the TV screen is B, when the tracking control is turned to the "+" end. 7. Readjust VR354 so that the same level of noise A and noise B can be obtained.

2-3. VIDEO CIRCUIT ADJUSTMENT ... CP-1 board and Video pre-amp unit

NOTE (1) : Use the Relay jig mentiond in the 2-1. PREPARATION to provide easy adjustment of the Pre-amp unit.
(2) : Before these adjustments place the unit in the SP mode.
(3) : When adjustment No. 1, No. 2 and No. 5 below, terminate VIDEO OUTPUT TP101 at 75 ohms.
(4) : 'No-signal REC mode' is not to supply any signal to VIDEO INPUT terminal.

No.	Item	Input	Mode	Point	Location	Remark
1	E-E LEVEL	Colour bar (100% white level) from Colour bar generator	E-E	VIDEO OUTPUT TP101 (CP-1 board)	VR102	 1. Adjust VR102 so that the level is 1.00 ± 0.05 Vp-p.
2	PB-Y LEVEL	Alignment cassette (VHJ-0008 or VHJ-0023)	PLAY	VIDEO OUTPUT TP101 (CP-1 board)	VR101	 1. Adjust VR101 so that the level is 1.00 ± 0.05 Vp-p.
3	N-CAN LEVEL	Alignment cassette (VHJ-0051)	PLAY	VIDEO OUTPUT TP101 (CP-1 board)	VR105	 W30V012 Drop out portion B A B 100% White peak Pedestal level Sync tip level 1V 1. Set the horizontal scale (TIME/DIV) of the oscilloscope to 1 msec./div.. 2. Adjust VR105 so that the drop out portion "A" of white peak (100%) and other portion "B" are same level.
4	CARRIER SET	No-signal	REC	TP103 (CP-1 board)	VR103	1. Set the channel selector buttons to the AV position and put the VCR in the no-signal REC mode. 2. Adjust VR103 so that the frequency is 3.75 +0/−0.05 MHz.
5	DEVIATION	Colour bar (100% white level) from Colour bar generator	REC (Adjustment) ↓ PLAY (Check)	VIDEO OUTPUT TP101 (CP-1 board)	VR104	 1. Insert the blank tape to the VCR and record colour bar signal. 2. Playback the recorded part, and check that the level is 1.00 ± 0.05 Vp-p. 3. Repeat adjust VR104 before the record, and the playback it, if not satisfactory.

P16V016

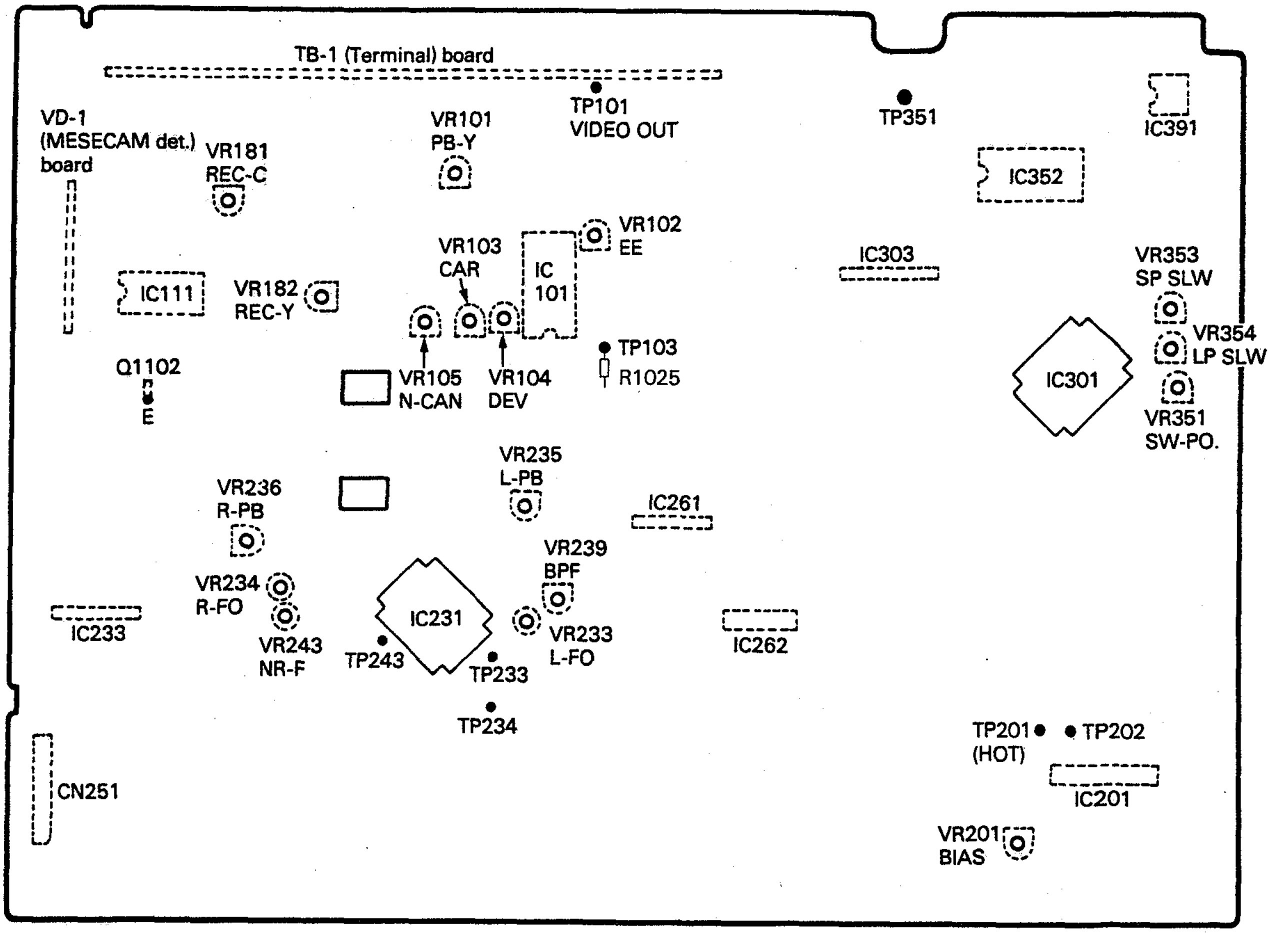
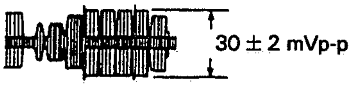
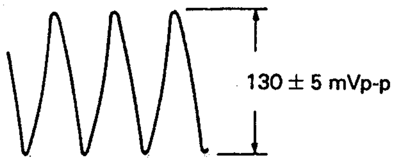

TB-1 (Terminal) board
TP101
VIDEO OUT
TP351
IC391
VD-1
(MESECAM det.)
board
VR101
PB-Y
VR181
REC-C
IC352
VR102
EE
VR103
CAR
IC
101
IC303
VR353
SP SLW
IC111
VR182
REC-Y
VR354
LP SLW
TP103
R1025
IC301
Q1102
E
VR105
N-CAN
VR104
DEV
VR351
SW-PO.
VR235
L-PB
VR236
R-PB
IC261
VR239
BPF
VR234
R-FO
IC231
VR233
L-FO
IC233
IC262
VR243
NR-F
TP243
TP233
TP234
TP201
(HOT)
TP202
IC201
CN251
VR201
BIAS

Fig. 2-3-1 CP-1 board (Foil side view)

No.	Item	Input	Mode	Point	Location	Remark
6	C REC CURRENT	Colour bar from Colour bar generator	REC	TP181 (HOT) shield case (GND) (Video pre-amp unit)	VR181 (CP-1 board)	W15V006  1. Rotate VR182 so that the luminance level is minimize. 2. Adjust VR181 so that the level is 30 ± 2 mVp-p.
7	Y REC CURRENT	No-signal	REC	TP181 (HOT) shield case (GND) (Video pre-amp unit)	VR182 (CP-1 board)	W20V007  1. Set the channel selector buttons to AV position and put the VCR in the no-signal REC mode. 2. Adjust VR182 so that the level is 130 ± 5 mVp-p. 3. Follows are the applicable models and their corresponding mark.

P06V014

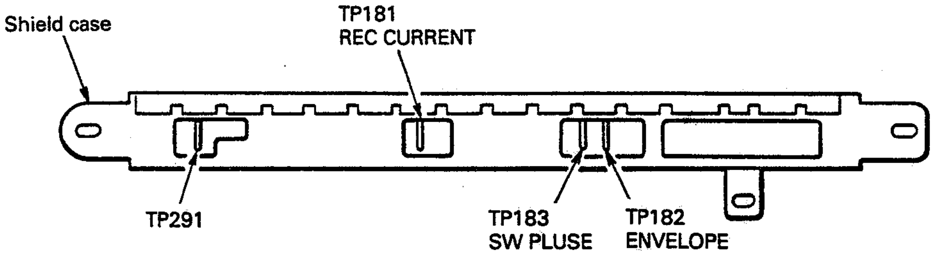

Shield case
TP181
REC CURRENT
TP291
TP183
SW PLUSE
TP182
ENVELOPE

Fig. 2-3-2 Video pre-amp unit

2-4. AUDIO CIRCUIT ADJUSTMENT

NOTE: When repairing and adjusting the CP-1 board and AD-2 board, use the optionally supplied Relay jig (VHJ-0088) since the flexible PCB for connecting to the AD-2 board is short. Connect the Flat cable end to CN271 on the AD-2 board and other end to CN251 on the CP-1 board.

SETTING BEFORE ADJUSTMENT

- The audio input terminal of the audio signal generator should be terminated at 600 ohms.
- The audio output terminal of the VCR should be terminated at 47 killo ohms (L ch and R ch).
- 0/AV button on the remote control ....[AV] position.
- AUDIO output button on the remote control ....[L] and [R] position.
- SP/LP select button on the remote control ....[SP] position.
- REC LEVEL control ....Center (click stop) position.
- REC BALANCE control .... Center (click stop) position.

P16A013

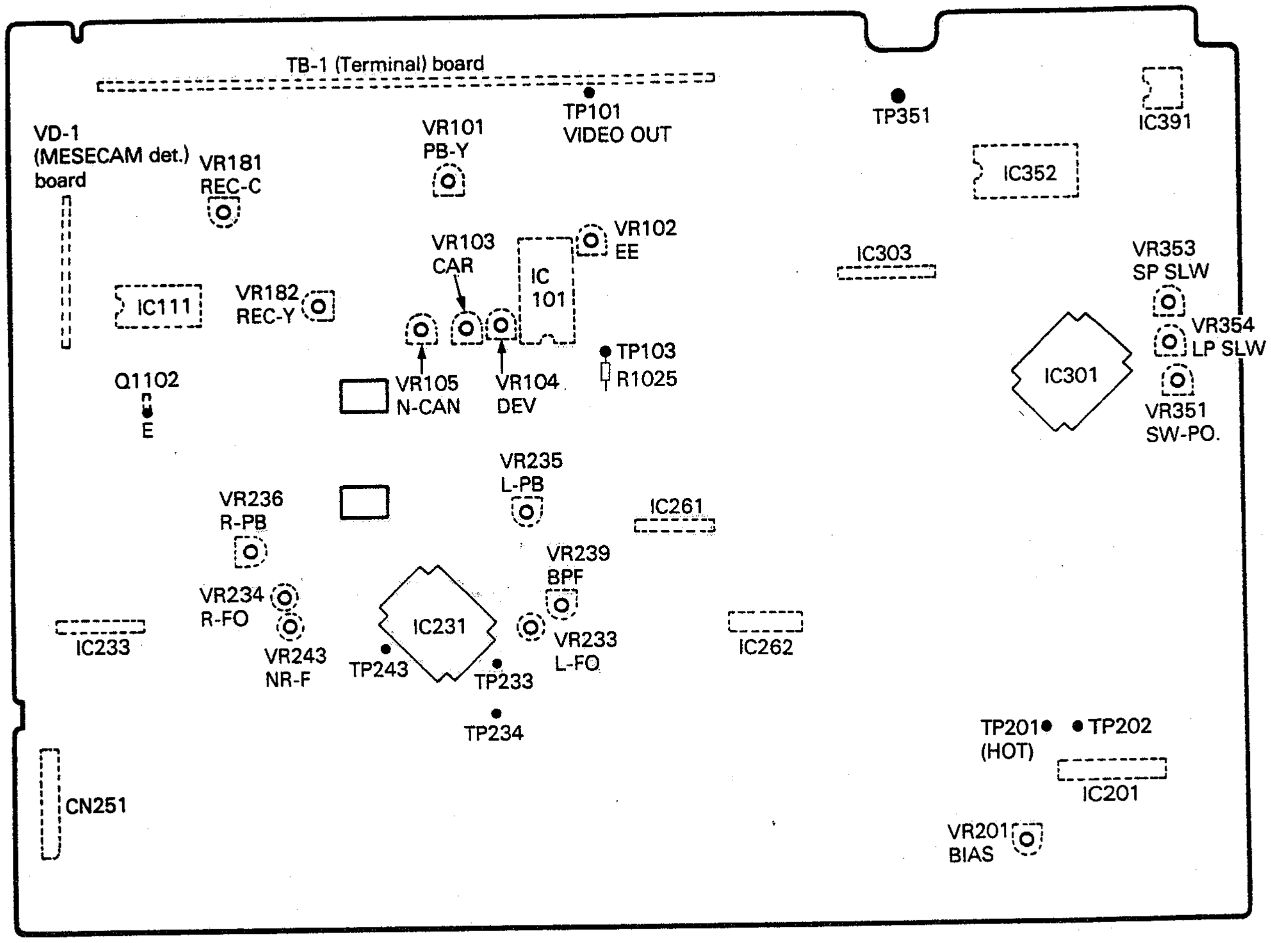
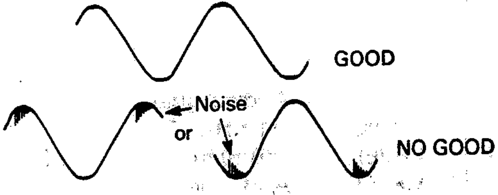

TB-1 (Terminal) board
TP101
VIDEO OUT
TP351
IC391
VD-1
(MESECAM det.)
board
VR181
REC-C
VR101
PB-Y
IC352
VR103
CAR
VR102
EE
IC303
VR353
SP SLW
IC
101
IC111
VR182
REC-Y
VR354
LP SLW
TP103
R1025
IC301
Q1102
E
VR105
N-CAN
VR104
DEV
VR351
SW-PO.
VR235
L-PB
VR236
R-PB
IC261
VR239
BPF
VR234
R-FO
IC231
VR243
NR-F
IC233
TP243
TP233
VR233
L-FO
IC262
TP234
TP201
(HOT)
TP202
IC201
CN251
VR201
BIAS

Fig. 2-4-1 CP-1 board (Foil side view)

Hi-Fi AUDIO CIRCUIT .... CP-1 board

NOTE (1): The Hi-Fi AUDIO section adjustment has separate adjustment items for the L ch and R ch.
The R ch adjustments are included in parentheses.
(2): 'No-signal record mode' is not to supply any signal to the AUDIO INPUT terminal.

No.	Item	Input	Mode	Point	Location	Remark
1	A-FM CARRIER FREQUENCY	No-signal	REC	TP233 (L ch) TP234 (R ch)	VR233 (L ch) VR234 (R ch)	1. Connect a frequency counter to TP233 (TP234) and ground. 2. Adjust VR233 (VR234) so that the carrier frequency is 1.4 MHz (1.8 MHz) +1/−9 KHz.
2	A-FM BPF	Alignment cassette (VHJ-0080)	PLAY	AUDIO OUTPUT terminals (L ch, R ch)	VR239 L ch (R ch)	W25A002  1. Connect a oscilloscope to AUDIO OUTPUT L ch (R ch) terminal. 2. Playback the alignment cassette and observe the waveform on the audio output. 3. Adjust VR239 until the noise component of both channel is minimum level.
3	A-FM NR FILTER	Audio signal (5 KHz, −17 dBm) from Audio signal generator	E-E	TP243	VR243	1. Adjust VR243 so that the output level is minimum.
4	A-FM PB LEVEL	Alignment cassette (VHJ-0020)	PLAY	AUDIO OUTPUT terminals (L ch, R ch)	VR235 (L ch) VR236 (R ch)	1. Adjust VR235 (VR236) so that the playback level is −7 ± 0.5dBm.

NORMAL AUDIO CIRCUIT ..... CP-1 board

NOTE (1): 'No-signal record mode' is not to supply any signal to the AUDIO INPUT terminal.
(2): Press the AUDIO output select button to the Mono (No indication) position.

No.	Item	Input	Mode	Point	Location	Remark
1	BIAS LEVEL	No-signal	REC	TP201 (HOT) TP202	VR201	1. Set the channel selector buttons to the AV position and put the VCR in the no-signal REC mode. 2. Adjust VR201 so that the level is 24 mVrms. 3. Confirm that the bias frequency is 70 ± 5 KHz.

2-5. LEVEL METER CIRCUIT ADJUSTMENT ... CP-1 and AD-2 board

NOTE: When repairing and adjusting the CP-1 board and AD-2 board, use the optionally supplied Relay jig (VHJ-0088) since the flexible PCB for connecting to the AD-2 board is short. Connect the Flat cable end to CN271 on the AD-2 board and other end to CN251 on the CP-1 board.

No.	Item	Input	Mode	Point	Location	Remark
1	AUDIO LEVEL METER	Audio signal (1 KHz, -7 dBm) from Audio signal generator	E-E	AUDIO OUTPUT terminals (L ch, R ch)	VR241 (L ch) VR242 (R ch) (AD-2 board)	1. Connect an audio signal generator to AUDIO INPUT terminals. 2. Connect the AC voltmeter to the AUDIO OUTPUT terminals. 3. Press the "0/AV" button on the remote control unit to the AV position. 4. Press the AUDIO output button on the remote control unit to the "Lch" and "Rch" position. 5. Set the AUDIO REC LEVEL control so that the audio output signal level is -7.0dBm. 6. Adjust VR241 and VR242 so that illuminates the -4dB LED. 7. Set the AUDIO REC LEVEL control so that the audio output signal level is -7.5dBm. 8. Adjust VR241 and VR242 so that confirm only the -4dB LED goes out.

P08A017

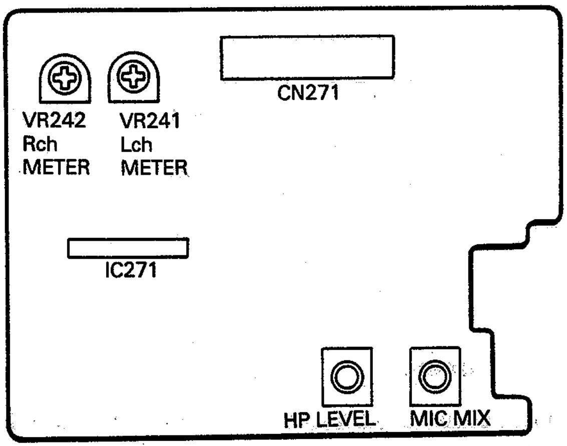


Fig. 2-5-1 AD-2 board (Parts side view)

2-6. MTS (Multiplex TV System) DECODER CIRCUIT ADJUSTMENT ... TN-3 board

No.	Item	Input	Mode	Point	Location	Remark
1	STEREO SEPARATION	Audio signal (R ch...1 KHz 100% mod. L ch...400Hz unmod.) from Audio MPX TV signal generator	E-E	AUDIO OUTPUT terminal (L ch)	VR631	1. Set the pilot signal for the stereo mode. With the L ch unmodulated, provide 1 KHz 100% modulation on the R ch. 2. Connect an oscilloscope to the audio output terminal (L ch) and adjust VR631 for minimum waveform peak-to-peak value.
2	STEREO (117.5 Hz)	TV broadcast (Stereo)	E-E	IC631 pin 5	VR632	1. Select the TV channel to stereo programme. 2. Adjust VR632 so that the waveform is maximize.
3	BILINGUL (274.1 Hz)	TV broadcast (Bilingul)	E-E	IC631 pin 6	VR633	1. Select the TV channel to bilingul programme. 2. Adjust VR633 so that the waveform is maximize.

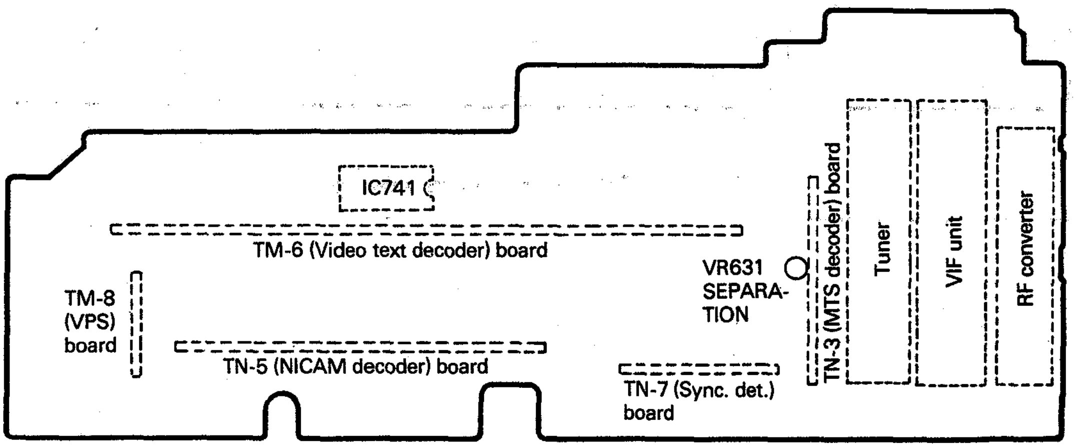

P08M003
IC741
TM-6 (Video text decoder) board
TM-8 (VPS) board
TN-5 (NICAM decoder) board
VR631 SEPARATION
TN-7 (Sync. det.) board
TN-3 (MTS decoder) board
Tuner
VIF unit
RF converter

Fig. 2-6-1 CP-2 board (Foil side view)

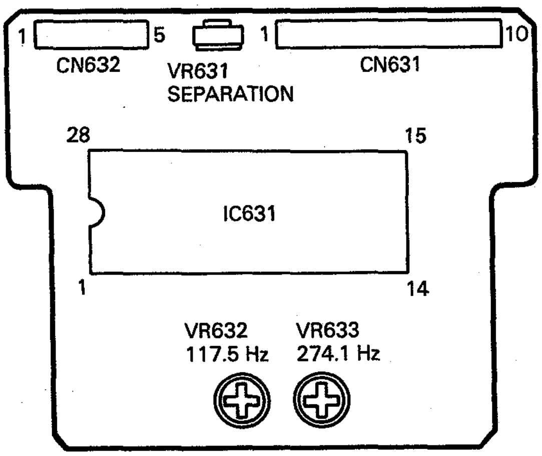

P07M004
1
CN632
5
VR631 SEPARATION
1
CN631
10
28
15
IC631
1
14
VR632 117.5 Hz
VR633 274.1 Hz

Fig. 2-6-2 TN-3 board (Parts side view)

2-7. VIDEOTEXT DECODER CIRCUIT ADJUSTMENT ... TM-6 and CP-1 board

No.	Item	Input	Mode	Point	Location	Remark
1	DECODER VXO	NONE	E-E	Emitter of Q1102 (CP-1 board) Fig. 2-3-1	CT761	1. Set the vartical scale (VOLTAGE/DIV.) of the oscilloscope to 10 mV/DIV.. 2. Connect the frequency counter to Emitter of Q1102 and ground through a pre-amp of the above oscilloscope. 3. Press the "MENU" button on the remote control unit. 4. Adjust CT761 so that the frequency is 4433619 ± 20Hz.

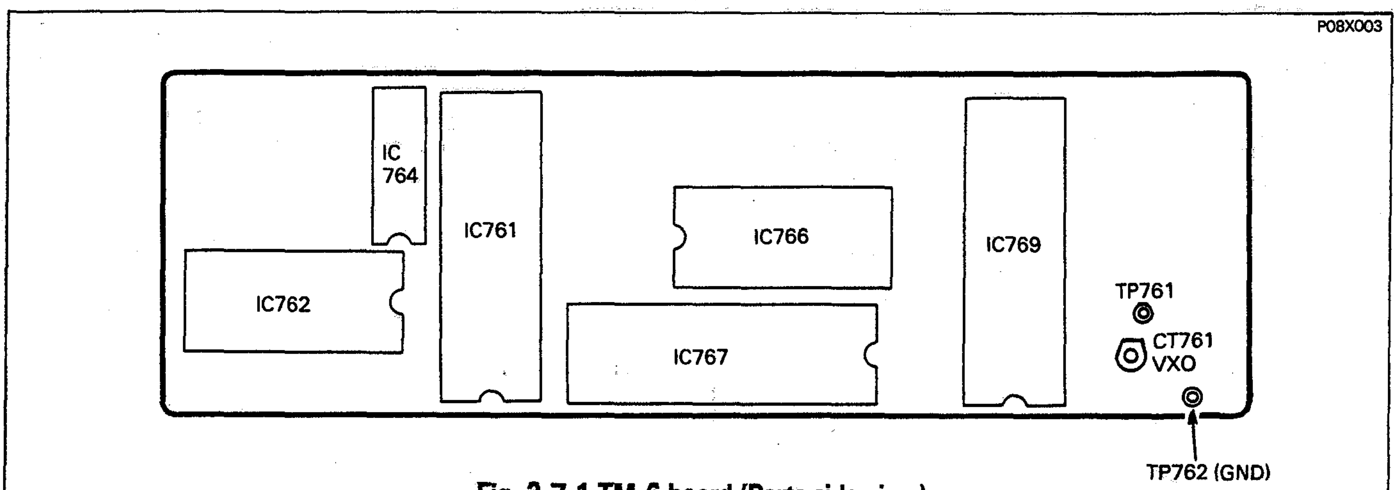

P08X003
IC 764
IC761
IC766
IC769
IC762
IC767
TP761
CT761
VXO
TP762 (GND)

Fig. 2-7-1 TM-6 board (Parts side view)

HOW TO INSTALL THE VIDEOTEXT DECODER

Preparations (refer to Figs. 2-7-2 and 2-7-3)

1. Unscrew the four screws(a) on the side of the set, then remove the top cover.
2. Pull out the CN251 flat cable at the front left of the CP-1 board.
3. Unscrews the six screws(b) and remove the CP-1 board.
4. If the unit is set on the service posts, the CP-1 board cannot be removed. Thus, move it slightly and insert the section of the concave shape of the PCB into the rear end of the chassis and stand it at an angle.
5. Unscrews the five screws(c), then remove the CP-2 board.
6. Remove the CN701 flat cable which is closest to the front.
7. Remove the J7090 jumper wire from the CP-2 board.... important.

Installment (refer to Fig. 2-7-3)

1. Insert the holder (A_1 and A_2) in the square holes on the CP-2 board.
2. Place the VIDEOTEXT decoder: TM-6 board to the parts side of the CP-2 board.
3. Slip the connectors CN761, CN762 and CN763 of TM-6 board into CN761, CN762 and CN763 on the CP-2 board and solder them in place.
4. Fix the TM-6 board, with holder(B) installed with screw(d)

Replacement

1. Plug the CN701 flat cable from the front to the CP-2 board, and then install the CP-2 board on the chassis.
2. Mount CP-1 board assembly removed as they were.

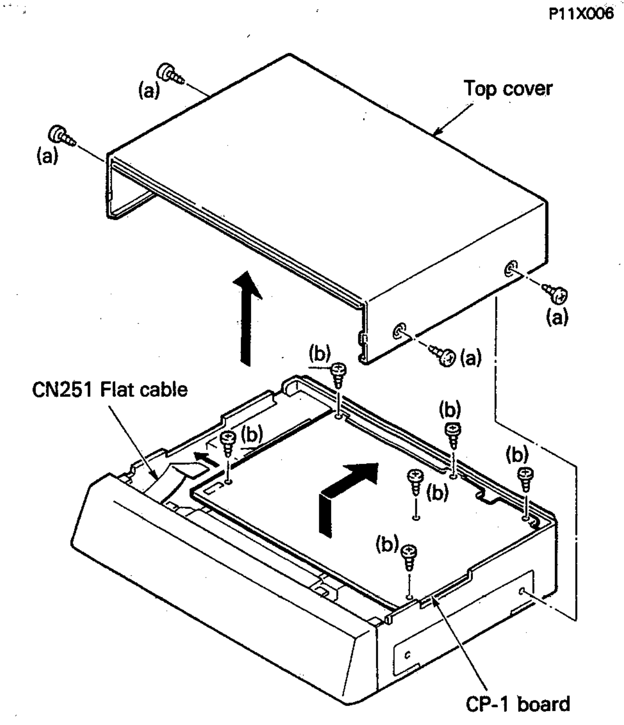

P11X006
(a)
(a)
Top cover
(a)
(b)
(a)
CN251 Flat cable
(b)
(b)
(b)
(b)
(b)
CP-1 board

Fig. 2-7-2

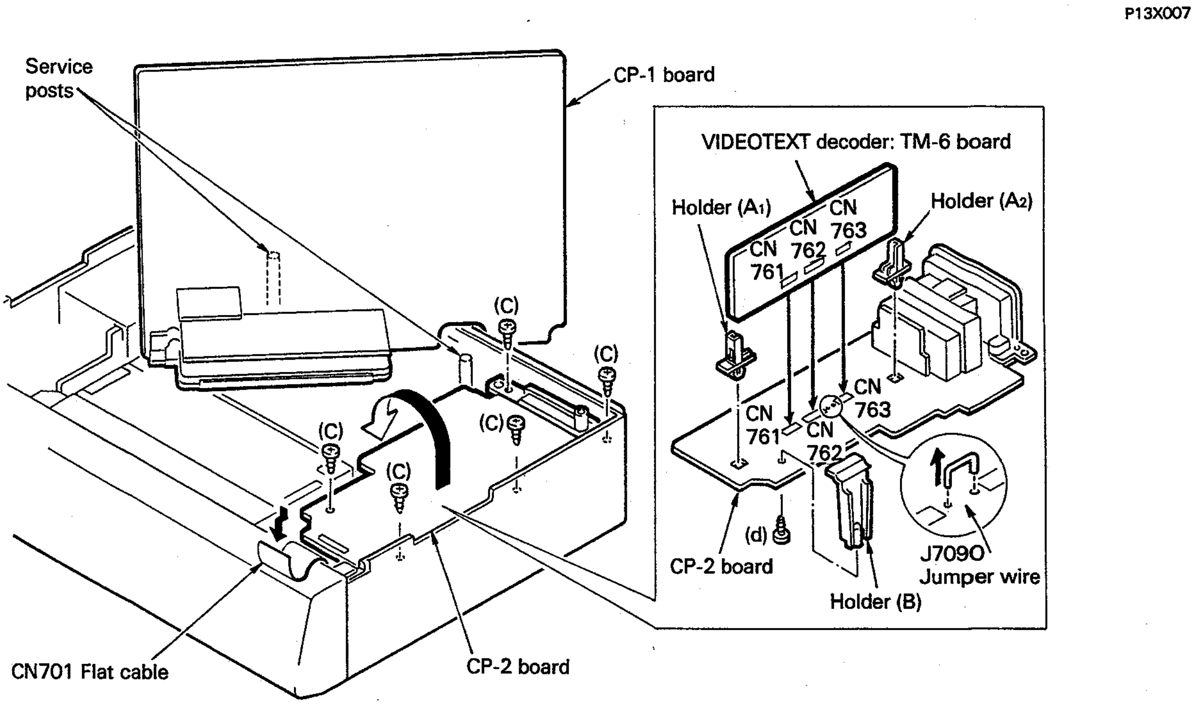

P13X007
Service posts
CP-1 board
VIDEOTEXT decoder: TM-6 board
Holder (A1)
CN 763
CN 762
CN 761
Holder (A2)
(C)
(C)
(C)
(C)
(C)
CN 761
CN 763
CN 762
(d)
CP-2 board
Holder (B)
J7090 Jumper wire
CN701 Flat cable
CP-2 board

Fig. 2-7-3

2-8. TUNER IF CIRCUIT ADJUSTMENT ... VIF unit

No.	Item	Input	Mode	Point	Location	Remark
1	RF AGC	TV broadcast	E-E	TV screen	VR611	1. Turn VR611 in the direction which causes snow to appear, then in the opposite direction until the show just disappears.

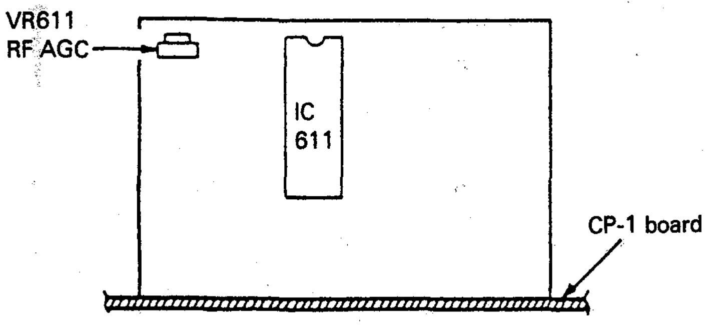

P06U004
VR611
RF AGC
IC
611
CP-1 board

Fig. 2-8-1 VIF unit (Parts side view)